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ABSTRACT

This curriculum guide introduces teachers and pupils to the results of a UNESCO sponsored project for developing international understanding through an experience centered curriculum approach. Using this approach students generalize from their personal experience to concepts about humans and societies. Fifteen teachers from eight countries developed the project for students between the ages of 11 and 18. The first section describes in general the experience situations, discussion techniques, and followup activities. The second section provides a set of guidelines for the teacher to apply the approach to specific subject areas such as biology, literature, writing, language, physical sciences, mathematics, and the arts. Section 3 discusses the teacher's role in reacting to the pupils' emotions. Section 4 examines the variations of approach according to age group and educational level. Section 5 describes the inservice teacher training for the project. Section 6 presents an evaluation of the project. Section 7 provides detailed procedures of 24 experience situations, class discussion ideas, followup projects, and applications to specific school subjects. Shorter summaries of 34 additional experience situations are also provided. The 58 total units include role playing situations, experiments in perception, communication and group behavior, questionnaire studies, action projects within the school and community, simulation and projective exercises, and fantasy scenarios. (DE)

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AN EXPERIENCE CENTERED CURRICULUM:

Exercises in

Personal and Social Reality

DEC 5 1974

A guide for Teachers and Pupils developed through a Unesco Project on Education for International Understanding

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FORWARD

This publication introduces teachers, pupils and educators to the results, up to now, of a Unesco sponsored project for developing an innovative approach to the social science and integrated studies curriculum and it contribution towards international understanding.

It includes only a selection of the experiences and activities of this project as it has now been in operation for three years and presently includes schools in fourteen countries. The pupils that have been involved in the programme are between 11-18 years of age. The success reported by the teacher's who have been developing and using the approach and materials encourages us to publicize the project more widely.

The publication begins with a brief overview of the project and its approach. This is followed by a set of guidlines directed towards the teacher, and should provide a sufficient basis for the experienced teacher to try applying the approach. The final section includes a detailed description of a number of the curriculum units and shorter summaries of others.

The approach described here should not be looked on as a curriculum to be applied as is. Rather, each school and teacher can critically select those portions that may be used and, more importantly, can design those changes called for by local conditions. Our purpose in this publication is only to sketch out a starting point for a long process. The development of a curriculum must be a national and local endeavor, even for a curriculum method that seeks a greater international outlook. We encourage the development of translated and 'nationalized' versions of this kind of publication so that it is more useful to the practicing teachers and pupils within a country. This would primarily involve decisions about the most appropriate place or places for these kinds of learning activities within the total school programme and the structure of pre- and/or inservice teacher training that may be needed.

It has often been said that "there's nothing new in education". This applies to the approach described here. Its various elements - the activities, materials and methods - have been tried in similar forms repeatedly in many different settings under widely varying conditions during the last 100 years. Their use has generally brought satisfaction to both teachers and pupils. With education, however, the fact that an approach works well is often unrelated to its continued existence or widespread acceptance.

Today, though, there is a more widespread readiness to examine educational practices and search for alternatives. We are issuing this publication as one proposal that merits consideration by those teachers and educational administrators who seek to integrate school learning with life and to increase the motivation of all of their pupils for school.

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Richard Appel, Federal Republic of Germany; Sándor Biro, Hungary; John Colclough, United Kingdom; Engelbert Deusch, Austria; Robert Hope, United Kingdom; Gabriella Lengyel, Hungary; Margaret Miller, U.S.A.; George Papaleontiou, Cyprus; Panayiotis Persianis, Cyprus; Jirina Skoumalorá, Czechoslovakia; Helga Strater, Austria; and John Waddleton, United Kingdom.

They have all done much extra work - developing units, revising them on the basis of classroom experiences, presenting the approach to colleagues and working with those interested in using the materials.

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Chris Adewole, Kenya; Afework Alemu, Ethiopia; Max Anyanwu, Nigeria; Anna Benesova, Czechoslovakia; Rachel Cohen, Paris; Balquis Mohammad Din, Pakistan; Tekeste Habtu, Ethiopia; Jum Haynes, Paris; Minna Lachs, Austria; Marcus Lindbom, Sweden; George Messiri, Nigeria; Richard Pring, United Kingdom and Keith Pulham, United Kingdom.

The conception, development and administration of the project activities has been the joint responsibility of Judithe Bizot, Unesco, H.M. Müller Wolf, formerly with the Unesco Institute for Education, Hamburg, and David Wolsk, Danish Institute for Educational Research, Copenhagen.

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Finally, but most importantly, the actual 'spark of life' for all this is our pupils.

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Introduction

"Education for international understanding is necessary for our survival," or ".....is a lot of meaningless words."

Today's teachers are likely to give either answer. For the past twenty years Unesco has felt that the answer will come 'out' in the doing. An ever-increasing number of teachers in schools, colleges and teacher-training institutions all around the world have been developing educational programmes for international understanding. Unesco has co-ordinated some of these efforts through its Associated Schools Project (Asp) by sponsoring conferences, publications, teaching aids and fellowships for teachers.

On the basis of these experiences, and with educational ideas and schools undergoing rapid changes, an expanded orientation to the concept of international understanding was looked on as having promise. The meaning of this 'expanded concept' is illustrated by the following example.

Teacher: Our war with Country A ended six years ago and we have been having friendly relations with them ever since.

Pupil: How can you be killing each other one day and be friends the next day?

Such a question places the class at a critical spot. The teacher may remember the history syllabus and ask the class to open their books to page 93 which describes postwar events. This could be supplemented with outside reading about events that came after other conflict situations, e.g., civil wars, religious conflicts, labor-management disputes, revolutions. The lesson would then end with a discussion of some similarities and differences between various kinds of post-conflict situations.

Alternatively, the teacher may feel it important to have the pupil seek his/her answer to that question of "How?" in an expanded, more analytical, framework. For example, "How do human beings perceive, feel, think and make decisions and influence each other so that killing seems right to them one day, peace another?" What can such events tell us about the nature of man and the social system?

A problem with this - in adding the analytical approach to the descriptive - is that it enormously complicates things for the teacher. Mostly, because there is no single and no final answer and no stopping point. It's something like reality.

Three years ago Unesco sponsored a workshop for 15 teachers from Associated Schools in 8 countries.x) They formulated an experimental project with a new orientation towards education for internation understanding. An approach was agreed upon, one which the teachers felt could deal with the complexities of human behavior, social systems and international relationships. The teachers worked with pupils between the ages of 11-18 and used from 1-4 hours per week with the approach and the materials that were developed and collected.

To illustrate this, we can continue with the example above: the how and why of war one day, friends the next. The approach involves developing classroom situations that actively explore relationships between events (historical and current) and characteristics of man's behaviour and social processes. These would include aspects of conflict and cooperation of leadership and power, of fear and anger, trust and friendship, of misperception and stereotypes, communication and persuasion, of group behavior and decision processes, of attitudes, values and beliefs. The pupils may participate

---

x) Austria, Cyprus, Czechoslovakia, Denmark, the Federal Republic of Germany, Hungary, the United Kingdom, the United States of America.

in a simulation-type exercise that developes cooperation and competition between groups and then look at their own reactions and feelings and decision processes. They do a simple experiment in perception and communication that illustrates the process of stereotypes; or they discuss their own answers to the question, What is a ___(Dane)___ ?

This approach to the curriculum seeks to analyze traditional subject matter by beginning with the pupil's own behavior, his personal experiences. From this, the pupils generalize; they move a step back from themselves and examine relationships with other experiences and situations; they formulate the concepts about humans and societies which help to answer those 'why' and 'how' questions. One advantage from proceeding in this way is that it tends to avoid oversimplification. From the classroom activities, which we've called experience situations, the pupils know the complexity of their own behavior. They've experienced the difficulty of describing how they decided to do something. It's an easy step from this to being more cauticus about others, about big sweeping statements on wars and enemies and governments and people.

At the teacher's workshop that began the project, a set of 35 of these experience situations (or units) were assembled. Some were written by teachers and staff, others collected from educational publications. They included role-playing situations, experiments in perception, communication and group behavior, questionnaire studies and action projects within the school and community, simulations and projective exercises and fantasy scenarios.

Most of these experience activities take about 15-20 minutes; the remainder of the class-period is used for an open-ended discussion. The unit may end there or, preferably, be developed much further through one or more follow-up projects and/or related experience situations. This will be clearer if the reader glances through a description of one of the units at the end ot this publication (pages __29__ to __42__).

The various units are related to the wide range of subject matter in schools that covers the nature and activity of humans. The teachers who have been using and developing the approach have done so in the following subjects: history, civics, social studies, psychology, human biology, foreign languages, the mother tongue, literature, and integrated or general studies. Thus, they use the units, the experience situations and follow-up activities, in varying combinations and sequences. Some teachers have made use of, or found time for just a few of them, while others have used many.

The teachers from the workshop also selected several of the units to be done together, that is having the pupils exchange their results from a unit amongst the classes in several countries. In this way, the international aspects developed as an extension of the pupils' own local experiences. The pupils were able to study the similarities and differences in the results that came from presenting the same experience situation to like-aged pupils of different nationalities.

For example, a Danish class tape recorded their discussion of "What is a Dane?" and exchanged it with a Hungarian class that had written their answers to "What is a Hungarian?" as well as their ideas about Danes. In the follow-up to the exchange, both classes were able to see how they look to others, how they tend to stereotype themselves, how misinformed were their explanations of national differences, and how it feels to be 'judged' by others. This judging is what caused their biggest reaction.

The approach and materials seek to improve international understanding by not teaching it directly. The reasoning behind this is as follows: for pupils, the teacher is a representative of the adult world. But the adult world comes every day to the pupils - in newspapers, radio, television, adult conversation - with reports of wars, poverty, starvation, crime,

corruption. The gap is just too wide between this kind of daily exposure and the few hours weekly that the teacher is seeking to teach international understanding.

As an alternative, this approach uses three inter-related processes. First, the experience situations and follow-up activities make more concrete and alive concepts such as co-operation - competition, freedom - social control - power, fear - aggression - empathy - love, decision processes, and individual and group differences in perception, communication and action. This brings the pupil into personal contact and involvement with both the theory and processes of individual development, group and institutional relationships. The pupils' interest in themselves is linked to the world around them: understanding of personal and social reality must serve as a foundation for the pupils' own interest in international understanding. The second process comes from sharing the same experience with pupils in other countries through the international exchanges and the collection of pupils' materials. Lastly, many of the activities provide training in those social skills which are needed for effective participation in community and national development.

By focussing on these three processes the teacher may avoid an inevitable dilemma of teaching international understanding: until the pupil has achieved a certain level of understanding, the whole subject is too distant and confusing to be of real interest. With no real interest, what is learned will be too superficial to constitute understanding.

AN EXAMPLE

The following example of a class doing the unit called "Four Hands on the Clay" may help illustrate some of the processes which are described.

Picture a pupil with his eyes covered, and not allowed to speak, sitting opposite an unknown classmate with a large block of clay on the table between them. He is to work together with this unknown partner, forming something, anything, from the clay. Fifteen minutes later the blindfold comes off and he looks happily at the elephant he's helped create. Around the room, others have made bowls, heads, figures, abstract forms and other animals. The discussion begins. He tries to describe how the decision was made to build the elephant: that he took the initiative but felt that his partner wasn't that pleased. Someone asks how the partner felt and that soon takes everyone off into the question of working together with an unknown person, and how they tried to figure out who the partner was. "But why? Why was it important to know? What is a stranger?" Later, a pupil asks the teacher what it was like watching everyone. Several want to watch another class do it.

What has been happening in this class? They have shared an experience together. They have all been faced with a similar situation, one which has involved their action and reactions as human beings (not as pupils absorbing book knowledge or museum exhibits). They have something to discuss ..... themselves, in common circumstances, but reacting individually. The situation has been structured so that certain themes may develop in the discussion. As these themes develop out of personal involve-

ment in the shared experience, the framework of the discussion can then be broadened and concepts developed: "I didn't feel called upon to produce something beautiful... because of the blindfold, the pressure was off." "Called upon? Pressure? It sounds like you felt you didn't have to play a role."

"What does it mean, 'playing a role?' Do we play different roles when we are with different people?"

"What could that mean? Is it the same with adults (and teachers)?"

"What about our public officials? Is there anything different about how they play roles?"

"But if I felt I was making the decision in a different way because of the blindfold, and the changed role, what is it like for the politician? How does he make his decisions - with the whole community looking on, or with pressure from his political friends?"

"How could we find out about this?" "I want to read some autobiographies of politicians." "I would like help with an interview study."

And so on. This discussion, and follow-up work could have taken many other directions. Depending upon the teacher and pupils and past-experiences, and the syllabus, it could have been left totally free to develop by itself (through group processes) or been structured by the teacher. What's probably more important is, first, the quality of the discussion that arises from an experience shared by everyone in the group; and, second, the way in which it produces an active personal involvement in one's own learning processes.

For their next period, the class has received a report from a class in another country which has done the same "experiment". Their report describes what happened and summarizes the discussion which followed. One of the pupils notices something in their report which he thinks interesting: it appears that in all cases it was the male pupil in the mixed pairs who felt he'd initiated the decision as to what to make from the clay. Yet, in their discussion summary, no one seems to have commented on this. The class tries to recall whether this also happened with them and decides it didn't. They wonder about the background and meaning of this difference. When they write their report, to send to this other school, they mention this difference and ask for comments on their interpretations concerning male-female roles in this other country. When they later find out about their misinterpretations, they follow this up in two directions: further study of male-female roles in their own and other countries; and the question of the meaning and importance of the kind of misinterpretations they had made.

This example, a composite from several classes, illustrates the use of one kind of exchange process that the teachers explored. The basic starting point for these exchanges was the creation of a common experience which could be shared with classes in other countries ----- experiences that begin with the same directions in each country but which may or may not proceed in a similar manner. In following up the discussion of one's own classroom experience with comparisons from other countries, a whole new dimension is added. The pupils have an opportunity to take a situation they have experienced and try to compare and understand it from a foreign point of view. They also see how their own experiences look to foreigners who have shared the same situation. They can see how easy or difficult it may be to straighten out the foreigners about themselves and vice versa. And, they may discover a wide range of underlying similarities in feelings and reactions.

The approach of this unit as well as the experience-centered curriculum in general can be summarized by briefly discussing the key concepts underlying the approach:

1. The New Social Sciences

The rapid expansion of research and publication in the social sciences, and its increasing application to all facets of society, increases its importance for the school curriculum. Mathematics and the physical sciences are being applied more now to the social sciences, thereby widening its interdisciplinary character.

2. An Experiential Approach

The class, school and community provide settings for direct experience of individual and social processes. Experiments, demonstrations, 'critical incidents', interview surveys, simulations, 'projective' games, role playing and community action projects are some of the specific techniques used in this approach. They are referred to as experience situations.

3. From Description to Analysis

The activities, reactions, decisions and feelings of the pupils, teacher and others in these experience situations form the basis of open-ended discussions and follow-up activities and reading. The goal is to have pupils develop skills in going from descriptive to analytical levels, to learn to generalize, to see relationschips between different kinds of class and out-of-school experiences. In doing this the usefulness of concepts for organizing and remembering information becomes apparent.

4. Analysis of Decision Processes

The discussion after the experience situation often focusses on the multitude of small and big decisions that constitute behavior; for example, the variations in decision processes from pupil to pupil, the role of information in decisions, differences in emotional reactions when making safe or risky decisions; and, lastly, the role of positive and negative responses from others (actual, imagined and anticipated) on one's sequence of decisions.

5. Empathy

The concept of empathy, a feeling of oneness with another, can be looked on as having two interrelated parts: (1) a feeling of safety and relaxation with others that comes with self-confidence; and (2) a skill that can be learned: an increased sensitivity and concentration on the totality of verbal and non-verbal messages coming from another. Both aspects are an important part of this curriculum approach with (1) being developed in all the units while (2) is a more specific objective of several units.

6. Acquisition and Application of Knowledge

a) Applying knowledge already learned:

In discussing their reactions during the experience situations, the pupils quickly discover that the more information and understanding they have the easier it is to make decisions with little anxiety. This can provide a starting point for orienting the learning of new information towards its applications in school, family and working life.

b) External and internal knowledge:

A basic concept of the approach is that pupils need help in changing their traditional view of the relationship between themselves and knowledge. Knowledge should not be looked on as 'authority', as something 'external' to be absorbed and respected, as 'things' to be remembered, organized under teacher's categories and textbook chapter headings; but, rather, as something 'internal', a tool for one's individual development, useful for the decisions one is and will be making. As such, knowledge is best when personally discovered and challenged and examined and then fitted into one's own individually functioning set of categories and concepts. Piaget has used the terms assimilation and accomodation to describe this process whereby knowledge is internalized into perceptual, emotional, cognitive and action processes of the individual. Many of the features of this approach are meant to help pupils achieve this relationship to learning new knowledge so that school learning can become similar to all learning.

7. The Teacher as Fellow Investigator

We are all permanent student of human nature and the social system .... it's necessary for our survival. This makes it somewhat easier for the teacher to work together with the pupils as an investigator. The experience situations also help since the pupils' reactions, decisions and feelings become the starting point of the discussion, thereby diminishing the teacher-as-expert role. The teacher's role derives from his/her greater life-experience and understanding of the relationships between description and analysis, theory and data, opinions and facts.

8. Open Relationships in the Classroom

With these experience situations and the general approach, the pupils and teacher more easily drop their limiting and depersonalized roles. An atmosphere of openness and trust often develops. This, in turn, results in much better outcomes from the curriculum units so there is a circular process of increasing benefit to the class as a whole and to the pupils' work in other subjects.

9. Communication and Cooperation Skills

Discussions and written work following the experience situations help pupils learn how to communicate about individual and shared experiences, clearly and fully, with both self-respect and respect for others. This is also a starting point for improved interaction processes in the classroom, especially improved co-operation (among the pupils but also between teacher and pupils). Project work in the community (information and attitude surveys, action projects) develops these social skills

in a wider framework and prepares pupils for later participation in activities concerned with community and national development.

10. Classroom Development of the Approach

Since this approach is quite different from what most classes are used to, pupils cannot be expected to fully utilize it quickly or automatically. They typically begin being a bit suspicious of the teacher's intentions. Thus, the method itself needs classroom discussion at several stages during its development. This kind of a common process analysis, shared by pupils and teacher, will integrate them into a "learning group" and help to diminish the gap between teacher and students. A special unit has also been designed to assist this process (see Unit No. 34, page 71).

B. RELATIONSHIP OF THE APPROACH TO EDUCATIONAL CONCERNS

A few comments about pupil motivation and individualized learning are relevant. As teachers, we know that the pupil who is personally and emotionally involved in learning something will take less time to do it, and remember it longer, and have a greater sense of achievement. We also know that examinations, grades and praise from teachers and parents often produce a high level of motivation, but only for the successful pupils. There are also a number of pupils who truly enjoy school and learning. However, most of us have also been faced with the problem of the unmotivated pupils, those who don't do well on exams, who generally find most classroom work to be frustrating and/or boring, and who fall hopelessly behind the faster-learning pupils.

Ever since the spread of universal compulsory education, the persistency and importance of this problem has produced a large number of attempted solutions from ability streaming to computer assisted instruction.

The present approach has demonstrated its usefulness in involving all pupils of a class and helping to decrease differentiations between bright and dull and between active and shy. For many of the participating teachers, this has been its most important outcome. Three things contribute to this full participation: (1) the experience situations are easy - both the more outgoing, active pupils and the shy ones can feel free to participate in their own way; (2) everyone is on an equal basis for the discussion since they've all just experienced something together which they can describe without a special vocabulary or 'high-level' thinking processes; and (3) the teacher is not examining the pupils or looking for right answers.

These three aspects concern the processes or method of the approach. It is equally important, in achieving high levels of motivation, that the foundation of the content is the pupils themselves. They start their voyages of discovery piloting their own ship and seeing what happens to their ship. They keep returning to their ship for reflection and to chart new courses.

In the beginning the pupils need the teacher's assistance in using the framework of their own individual lives - past, present and future - to give form and meaning to traditional subject matter. The teacher needs to continually refer to the every-day decisions pupils are, or will be making, and to guide the pupils through the process by which knowledge of maths, history, biology, etc. gets applied to decisions concerning schooling, occupation, marriage, child rearing, leisure, economy, etc. There is a more detailed discussion of this aspect in Part II).

A final point about sources of motivation concerns individualized learning. A class learning from a textbook and the teacher's lessons uses much of their time and energy in adjusting the structures of their own information processing systems, their individual classification structures, to the teacher's and textbook's classifications. Alternatively, when an experience situation is used as a starting point, and an open-ended discussion follows, the pupils are, in a sense, being left alone to learn in their own style. They individually put in and take out of the situation what they are ready for. When they follow this up with textbooks and teachers lessons, it is with a series of questions stated in their own terms and linked to their own reactions to the experience situation and to their individual views of their own past, present and future lives. This is an efficient learning system for all pupils. It puts the mass of pupils who never will become experts at book learning back into the picture. For the class as a whole, the reduction in frustration and boredom results in a similar reduction in passivity, agression, or acting out. And the teacher with a class of 35-40 pupils is better able to concentrate on the learning. The increased pupil motivation achieved by teachers with this approach has been a central part of its value. Obviously teachers enjoy their work much more with a whole class motivated by their learning achievements. This has been of primary importance in a project developed through the efforts of the participating teachers.

The remainder of this document has seven parts. The first develops more specific guidelines for the teacher: (a) for using the experience situations; (b) for assisting in the discussions; (c) for developing the follow-up activities both within and out of class and internationally. The second part suggests possible ways to integrate the units into the traditional subject syllabus. The third part examines the teachers role and the emotions of the pupil. Part IV deals with varying the approach according to the participants age and context; and Part V with in-service teacher-training. Part VI gives a summary of the evaluation study and the concluding section is a description of the units.

I. ELEMENTS OF THE UNITS

A. The Experience Situations

Most of these require very little or no advance preparation and equipment. The class also needs very little or no introduction. Generally, the less said, the better: a specific title should not be given, the concepts or themes they are designed to illustrate should not be discussed in advance. The teacher can help to create a useful sense of excite-

ment by organizing the activity very quickly and starting it right off. A typical example: "Today we will start with some action - a short exercise, call it a group dynamics exercise. First, please form into pairs, preferably with someone you don't know very well."

With many of the activities it is important to see that they have little end in themselves beyond providing a shared experience for individual and group analysis and discussion. The content is less important than the process. The more open the pupils are to the activity, to their own and their class-mates' feelings, thoughts and reactions, the more "data" they will have for this discussion.

An atmosphere of spontaneity is good. It helps to loosen up the pupils so that they can project themselves fully into the activity. When a situation arises where the pupils ask for further rules, it is best to say that there are no more rules.

In some of the activities it is good for the teacher to participate. This can happen quite naturally where pairs or teams of four are needed and there are an odd number of pupils in the class. With a few of the activities, several pupils may hesitate to participate. This possibility should be mentioned by the teacher at the end of his/her introduction. A statement indicating that "it is quite natural that some pupils may not feel like participating when the activity is something quite new and unusual" will leave the pupils free to decide for themselves.

Both the teachers and pupils are often interested in trying out some variation of the original activity or following it up immediately with something related. In most cases it is good to try out these ideas. The more teachers and pupils feel they can create and recreate with this kind of curriculum approach, the better it will be. If the pupils are to feel that they truly are the center of the curriculum, a fixed and rigid structure cannot be imposed upon them. The same applies to the teacher's creativity in using the curriculum. The instructions for each activity have been deliberately kept short and variations indicated to encourage this creativity and an experimental approach by the teacher.

It is also important to realize that the experience situations - the games, experiments, demonstrations, etc. - don't fail. Whatever happens, including the unexpected, happens because of the characteristics of the pupils, the teacher, the school milieu, outside events, etc. No one experience situation will ever develop in exactly the same way, nor does it need to have a single specific goal. For example, if a group dynamics experiment normally produces a competitive situation, but in one class something quite different develops, the pupils will be quite fascinated that they didn't behave "as expected". The unexpected reactions are what they will want to analyse. Very fruitful discussions have often developed from these 'failures'.

This means that the teacher should be open-minded and ready for the unexpected while the class is "going through" the activity. When the activity is free to develop with its own internal dynamics, it will have much more meaning for the pupils and their involvement can reach a deeper level.

B. The Discussion

Once the activities are brought to a halt, the pupils will quite naturally carry on their own spontaneous discussion - in pairs or small groups. It is often good to let this continue until the pupils seem in-

terested in coming together as a total group. When they are together, if they are waiting for the teacher to get them started, a question such as "What happened?" is usually sufficient (and doesn't limit them).

During the discussion the teacher can take many roles. It is difficult to be specific about this since it depends so much on the age of the pupils, the size of the class, the amount of time left for discussions, etc. There are, however, several things which distinguish these discussions from classroom discussions that aren't linked to an experience situation.

1) Appealing to the non-participatory pupil

With everyone sharing the experience, it is easier to bring the shy and generally inactive pupils into the discussion. By asking something like, "How was it for you?" those pupils who would tend to say nothing if left alone can find it easy to say something without embarrassment. Pupils who usually let the "smart ones" dominate discussions find that they have something to say and can make a positive contribution to class discussion following the experience situations. But they may need some help to break out of their old habits.

2) Open-Ended

The discussion can often reach an unusually intense and exciting level when both pupils and teacher feel it is free to go in any direction. The emotional aspects of the experience situations can induce a mood of fantasy and humour, of anger, wonderment or pleasure, of a sudden need to express something. Sometimes the things said seem totally unrelated to the activity. At other times, the relationship will be clearer, and understood and shared by many. For example, in the middle of a discussion following the 'Blind Trust' (page 29) activity, someone suddenly remembered a feeling of closeness towards mankind which he had felt once when a baby was asleep in his arms. The class followed up the boys' intervention by talking about the complete and unquestioning trust young children have and the kinds of common incidents which tend to diminish this sense of trust.

In other, yet similar instances, one pupil's point may lead nowhere or take the class away from what it had been involved in discussing. When this happens, both the teacher and other pupils have a responsibility to see when a discussion should be brought back to an aspect of more general interest. A discussion with the class on their sharing of this responsibility with the teacher is often useful. However, this judgement is often difficult to make. The teacher who is accustomed to leading discussions that cover a number of important points may tend to be over-directive here. But after an experience situation, where the pupils' involvement may set off a whole chain of individual thoughts, there is an advantage to having more freedom. Otherwise the individuality of the experience is lost. Thus, to make this kind of discussion most useful, the teacher should shift his/her attention from a "lesson outline" to the pupils, keeping closely in touch with their feelings. It is exhausting work. But the reward comes when you notice the intent face, the pupil with a stream of thoughts running through his/her mind, who only needs to see the teacher waiting expectantly before putting the thoughts into words.

When pupils experience this approach for the first time, the teacher needs to be more active in asking questions to help them to develop more complete descriptions of their reactions to the activity, and to have the discussion shift from a description to an analysis that probes deeper and develops concepts. After a few units have been worked through, the teacher can discuss with the class this structure for the discussions and can then 'formally' propose that the class share the responsibility for 'leading' discussions. One or two pupils could be discussion leaders (in rotation) or the responsibility can be shared by everyone. A comparison of results under both systems is interesting. There is also a unit that has been prepared to assist pupils and teacher in making a real learning situation out of the discussion (see page 71 Words and Things). Without this kind of specific training many pupils view the discussion as "fun" but "not learning".

3) Focus on decision processes

The discussion will be more concrete if the pupils first focus on the decisions they were making during the activity. This can include: considering the processes involved in thinking of alternatives and eliminating all but one; the kinds of information and previous experience that were used in finding and eliminating alternatives; and the feelings which result when information and past experience leave one in conflict between alternatives or with too little information to find any satisfactory choice. For example, in the 'Rumour Experiment' (see page 42), was a decision made, consciously or unconsciously, to concentrate either on remembering the descriptive words or on building up a mental image of the picture from the description? Was it the same with the others? Another example, in the 'Blind Trust' (see page 29) experience, how did the leader decide to hold and guide his blind partner? In '4 Hands on the Clay' (see page 33) how was the decision reached about what to make? Was it a joint decision or did one partner make it? With such a partnership, how does each one feel when one takes responsibility for making the decision?

Pupils are not accustomed to analyzing a complex activity in terms of the sequence of decisions that take place. However, they will get more out of the experience situations when they can structure the discussion so that it focusses on:

- the decision processes;
- the feelings involved in making the decisions and anticipating the possible consequences;
- the role of feedback from one decision on making the next one; and
- the information used and the kinds of unknown information which could have been useful for the decision processes.

It is important to develop a framework for the discussions in which the decisions made in the class activity are related to the pupils' real-life decisions, i.e. further schooling, occupational choice, marriage and family size, leisure activities and moral, religious and philosophical influences on actions. In this process the pupils begin to learn how to generalize from their specific reactions to the experience situations, to see relationships with other situations and experiences. Concepts about human behaviour will be developed from this aspect of the discussion. The descriptions of the first four units (pages 29 to 42) contain

examples of this.

What emerges from this kind of discussion is a greater consciousness of how knowledge is used and the anxiety that results when decisions are made with inadequate knowledge.

4) Developing follow-up ideas

During the discussion, when points are brought up about knowledge that was lacking, or when pupils have made different decisions based on different assumptions, the pupils and teacher can write this down. Follow-up activities that seek answers can then be planned. For example, as a follow-up to the 'Rotating Trapezoid Illusion' (see page 71), several pupils arranged to show the demonstration to six-year olds to see if it had the same effects.

5) Sharing Experiences: Teachers' role

Much of the teacher's contribution to the discussion should come from a sharing of her/his own experiences. In a class where the teacher shares experiences, the pupils will find it easier to do the same. If the teacher has participated in the beginning activity, this will help her/him come into the discussion as a participant and member of the class group rather than just as a discussion leader. Then, when the discussion begins to generalize from the experience situation, the events and decisions from the teacher's own life will often be relevant. Pupils realize that it's not that easy for the teacher to share with them her/his out-of-school existence. Seeing the teacher make the effort will help them in doing the same. Thus, hierarchical structures of the traditional authoritarian classroom setting might be overcome.

It is important to see that the structure of the discussion prevents this from turning into a kind of personal psychoanalysis, in that both teacher and pupil are sharing an experience. There is no judgement or analysis to be placed on a specific or personal experience and none should be offered by the teacher. For both teacher and pupils, personal experiences are being shared in the context of finding general concepts about human behaviour (see page 23).

6) Writing reactions

Especially with a larger class, it is often useful to ask the pupils to write down their own reactions to the experience situation. This may be done before the discussion, in which case it will give each pupil a chance to think about himself in the activity before becoming concerned with all the other class members. The pupils sometimes want to pass around or read aloud what they have written. This will supply good data for beginning the discussion. Alternatively, taking the last 5-10 minutes from the end of a class period for writing will enable them to include both the activity and discussion in their notes.

In some classes the pupils have been keeping their own diaries with personal thoughts and reflections from the activities. These can be especially useful in relating the class periods to further projects and reading as well as in writing reports. With a diary the pupils have on the one hand a better basis for doing normal "academic" work (reading and writing) and at the same time this work becomes more relevant to their personal interests and needs.

C. Follow-up Activities

1) Integration with School Subject Curriculum

Often teachers will complete a unit within a single 1-2 hour class period. Although, with many of the units, this is sufficient time to do the experience situation and a short discussion, much more can be gained by further developing the ideas and concepts of a unit through a series of follow-up activities. It is in this phase that the approach seeks to integrate the traditional subject matter of the school curriculum with the questions and problems and concepts that arise from the experience situations. In this process pupils come to appreciate that all human knowledge has developed to solve human problems.....the same kinds of problems that come up during their discussions. (Kepler had the job of figuring out the dimensions of wine casks with a minimum of wood for a maximum capacity. In doing so he invented the calculus of variations, and found out that his ideal solution was already the one being used).

The unit descriptions include specific suggestions for follow-up activities; in Part II 19 there is a more general orientation towards the wide range of 'contact points' between the traditional subject matter of math, biology, the physical sciences, history, foreign languages and mother tongue and social studies. The main features of this integration with subject matter consist of: (1) the development of one's understanding of personal and social reality as a framework for defining critical decision situations; and (2) the application of knowledge (of all kinds) to assist one in clarifying and making these decisions.

2) International Exchanges

The international project for which these units were assembled includes a system for exchanging results amongst the classes in different countries. For example, the final drawing from the 'Rumour Clinic' (see page 42) experiment has been exchanged along with a summary of the discussion that followed it. The pupils thus have a chance to compare their behaviour with others, noting and trying to explain similarities and differences when the same photograph is used as a starting point. In this case, what caused the most comment was that even though many of the final drawings were almost totally different from the original picture and from each other, most of them had the bicycle. (See drawings).

The pupils can also examine and share their own stereotypes and stereotypes about themselves in these exchanges. For example, a class in Denmark receives a tape recording of a discussion held in a German class on the topic "What is a German?" (see page 63). Before listening to the recording they make their own recording: first, giving their opinions on "What is a German?"; then, trying to guess what the German pupils have said on the tape; and lastly, discussing "What is a Dane?". They then listen to the recording from Germany and, afterwards, add to their own recording comments on the accuracy or lack of it in their guessses about what the German pupils would say.

This is one example of the kinds of things which can develop from the exchange program. Each unit has its own potentialities. Together, they add up to a much wider sharing of common experience situations. The pupils can try to project themselves into the experience as it happened in another country (sensitivity to others); then they can check out how well they were able to see and feel the experience from another person's viewpoint.

As with other aspects of the curriculum approach, here too, the creativity of pupils and teachers should be used to devise all kinds of variations on this theme and develop new themes.

The project teachers have generally found it best to be linked together with two other schools and to arrange exchanges of about 3-4 units per year. A large collection now exists of the results from several of the most frequently exchanged units: Balloon in Flight, Fantasy Trip, Rumour Experiment and What is Man. It's an interesting collection of cross-cultural data. Several other units are especially suitable for the exchanges: Export-Import, Films, Foreign Residents, Humour, Ideal Community, Level of Aspiration, Loaning Words, and Shifting your Viewpoint. (See Part III).

Further suggestions about the framework for the international exchanges are included in the description of the unit, Level of Aspiration (see page 37).

3) Individual Study

Pupils may develop their own particular interests as a result of the experience situations. The open-ended quality of the class discussions will have more meaning if an individual pupil (or small group) can follow-up the specific issue which concerns him/her. This generally involves a wide variety of information gathering approaches; the teacher is typically needed to guide the pupil somewhere between oversimplifying and going off in too many directions.

When the individual pupil, or small study group, is prepared to share their results with the rest of the class, this can become an occasion for examining this kind of communication process itself. The aims of the unit Shifting your Viewpoint (see page 63) are relevant to this process.

4) Projects

a. Within School. As the social institution with which pupils have most contact, the school is a natural place for pupils to begin their explorations into group behaviour, social roles, and social structure and functioning. However, this is often difficult to arrange and problems can arise. The circumstances for this differ so widely from place to place that one can only encourage interest and advise caution.

One approach which is simple and relatively trouble free is for your pupils to get permission from another teacher to run one of the experience situations within another class. Older pupils often wonder if the reactions to an exercise will be much different with a class of younger pupils. Quite good results have been reported from doing this and it provides an excellent situation for examining the developmental aspects of perception, communication, action, and emotions.

Further suggestions are included in the various unit descriptions.

b. Out-of-School Activities. The value of this approach will obviously increase as the pupils are able to extend their explorations of human activities from the classroom and school to the community. For many teachers this is difficult to arrange during school hours. And, if pupils have many hours of required homework, this also limits possibilities. However, there are educational trends in many countries towards a greater integration of school and community. And, in some cases, the pupil's own enthusiasm for community studies and action projects will 'produce' the

time to do them. Many schools solve the scheduling problem by setting aside the regular schedule for 1-2 weeks, working full-time on a project. The whole school may be involved or only several of the classes. This works best if there is adequate time in advance for planning and organizing the work, and, afterwards, for following it up.

There are two general types of out-of-school activities that develop from the experience situations and discussions: informational studies and participatory studies or action projects. For both types, three things need to be said: (1) more time than one would imagine needs to be set aside for planning. (2) The pupil's enthusiasm often results in too large a project. Thus, until the pupils have some experience with this type of work, the teacher needs to be fairly directive and to actively assist the pupils. A very small project, well done, is the best beginning. And (3) the primary value of these activities comes from a combination of practice with theory, or field experience with classroom analysis and synthesis.

(i) Informational Studies

Attitude or opinion questionnaires. In class discussions, pupils (and teachers) often make statements about the attitudes and opinions of other groups ("Parents think pupils are irresponsible"). When such statements are made, they can become the beginning of an attitude survey to get at "the facts". The first thing to decide, after the topic is agreed upon, is the number of subjects (people) that will be questioned and the type of questionnaire or interview form to be used. If many subjects, it's best to use a form of questionnaire that immediately gives quantitative (statistical) data: questions where only a "yes - no" or "agree - disagree" answer is recorded; and scales; for example:

"How do you feel about modern music?"

dislike it like it very much

/ / / / / Put an X along the scale

0 1 2 3 4 according to your opinion

Pupils should learn that the way a question is asked will often influence the answers. For example, peoples' opinions will seem different if one asks: "do you like modern music?" or "do you dislike modern music?" One avoids this problem by stating questions in a neutral form: "What do you think about modern music?" Or, "which do you prefer?"

Where it is not important to question a large number of subjects, the pupils may learn more by using open-ended questions. In these, the subjects answer freely and their whole answer is written down or tape recorded. To summarize and analyse these answers statistically, one makes up a set of categories that apply to the answers and then goes through the replies, counting and recording the number that fall into different categories. There will always be some answers which are 'unclassifiable'. These can be put into a "miscellaneous" category.

Before the pupils do the survey, it is useful for them to make guesses about how it will turn out, to make hypotheses about their results. In doing this they may realize the need to make revisions in the questionnaire or changes in the 'types' of people that will be questioned. It is also advisable to try out the questionnaire on 5-10 people before deciding on its final form.

- Community Survey. In this kind of project the interest is in gathering information about some aspect of the community. The kinds of surveys which pupils have done include such things as educational budgets, child welfare services, water pollution, leisure facilities and participation, conditions of foreign workers, youth unemployment, discrimination against women in employment, and occupational choices of pupils.

For most surveys of this kind it is advisable to get assistance from community resource persons who have direct contact with the situations being studied. It is also useful, for obtaining cooperation, to promise that copies of the final report will be sent to those interested. An interesting class session can occur by asking a relevant person in the community to read the report and then discuss it with the pupils.

In many cases the value of a survey will be increased when the pupils can compare their community with others, either close-by or in a foreign country. Arrangements can often be made for joint studies but adequate planning time is essential.

(ii) Action Projects

An action project will put pupils in working contact with the institutions of our society and the people who are connected to these institutions, both the officials and the recipients (pensionists, unwed mothers, the sick, foreign workers, etc.). A list of suggested kinds of projects is placed at the end of this section. These projects can fulfill several levels of objectives: (1) gather information - a 'descriptive understanding'; (2) analyse the institutional systems - decision-making, communication, reward and punishment systems, power structure - a 'conceptual understanding'; (3) achieve a change in attitudes; (4) achieve structural and/or procedural changes in the institutions; and (5) develop the skills of the pupils - in communicating with social institutions, in decision-making, in empathy, and in being in touch with themselves.

Each of these objectives is important in itself but a project plan with a final goal of including all aspects will greatly improve the outcome and do much to insure against superficiality, 'do-goodism', hollow victories or final frustration and cynicism. Since these kinds of negative outcomes have sometimes resulted from past work with action projects, the more inclusive and far-reaching goal may be quite important.

A program that attempts do deal with the five levels of objectives will need an organizational structure which is carefully planned and developed. This may mean nothing more than a committee with representatives of pupils and school officials, parents, and the relevant social or governmental agency. A liason group that links existing committees may be more appropriate; or there may be an existing organization or committee that could be expanded with pupil and teacher representatives.

The outlining of alternatives as those above, and the decision process involved in choosing one, are an important learning experience for the pupils. For example, questions such as the following are relevant for discussion: (1) must one operate bureaucratically to influence bureau-

cratic institutions? (Should 'our' committee function like 'their' committee?); (2) What kinds of information are useful in selecting from alternative organizational strategies? (Must we know if the apparent power structure is the 'real' power structure?); and (3) How restricted or wide should our communication channels be, and is one- or two-way communication likely? (Do we accept the opinion of one foreign worker as representative or must we speak with many?).

Adequate time will be needed for setting up an organizational structure which is suited to the project's goals. This time may be especially long if community agencies are involved or if meetings or permissions are needed from groups that only meet once a month. If there is nothing to fill this time gap the pupils may lose interest; thus, it is often useful to plan interim activities which serve as preparation for the project. Examples of this are: a questionnaire survey (see page 15), focussed discussions with parents and other adults and data gathering from old newspaper files and city government records.

It is difficult to suggest guidelines for the actual carrying out of an action project as there is too much variety. A few comments are appropriate, however:

(1) Pupils typically expect to be able to accomplish more than is possible. If they are gathering data they will often end up with much more than they can possibly analyze. They enjoy going out with portable tape recorders and coming back with hours of interviews, only to find that their classmates lose interest listening to it all and no one has the patience to write them up or find selected excerpts.

(2) In many countries, pupils are quite cautious about 'imposing' themselves upon the adult world, having expectations of rejection. If this happens, it is probably worthwhile discussing it with the class. The teacher may want to introduce such a discussion by using one of the experience situations; for example, Guilty or Innocent, Shifting your Viewpoint, or Role-Playing.

(3) At all phases of the project, a continual integration of practice and theory is important. The theory may concern the nature of bureaucratic structures, conflicting role demands, patterns of communication, social class differences, the role of mass media, etc.

Several mini-theories can be linked into a broad theory. The function of the theorizing, as a way of analyzing the practical work, will be to organize the learning experience and to develop a consistent viewpoint. It also sensitizes pupils to the explicit and implicit social theories (or beliefs) of public officials and others.

(4) An action project should be looked on as an exercise in interdisciplinary studies. This can best be realized by involving several subject teachers. For example, in a project looking at town planning schemes for additional roads, the physics teacher could be helpful with the technical aspects of road surfaces (frictional decay, weathering, stress) while the geography teacher may know something about water runoff and drainage. For statistical analysis of survey results, the mathematics teacher is often needed. It is best to anticipate these needs from the start; involving teachers from the beginning avoids coming to them with questions that are impossible to answer as the information that has been obtained is inadequate. In many cases various community resource persons can substitute for or supplement the teacher-advisors. Ideally, a combination of both will insure that the project work is better integrated into the regular subject curriculum in all subjects.

A list of different kinds of action projects:

1. Language teaching to foreign residents
2. Help set up integrated youth clubs
3. Encourage kindergartens, playgrounds, parks and play-groups where needed
4. Encourage local radio and T.V. to provide programmes for foreign residents, old people, children, etc.
5. Urban renewal and pollution control, e.g. plant trees, document and conserve those which exist
6. Old people's welfare (painting workshops, 'meals on wheels', reading newspapers, help in shopping, etc.).
7. Hospital visits and home visits to sick persons
8. Help with rehabilitation of delinquents
9. Local public transportation analysis, and improvement
10. Study public services (benches on streets, toilet facilities, lighting, maps and timetables, litter bins, telephones, street signs) and work for improvements
11. Organize a school garden where you experiment with a new potential cash crop for the village
12. Help develop a new local craft for marketing
13. Help develop a programme for periodic health and nutrition surveys of the village population.
14. Campaign against vandalism
15. Introduce an anti-smoking campaign
16. Make land-use surveys
17. Develop new ways in which local charitable organisations could be used
18. Safeguard wild-life
19. Help with the care of children where needed
20. Study and publicize local customs and traditions; study, record and analyse local languages or dialects; interview old community residents about community life 60-70 years ago. Publish an oral history of your village.
21. Study women's and men's rights (equal pay for equal work)
22. Local entertainment (analysis of what 'entertainment' means and who it effects)
23. Set up courses in first-aid, nutrition, family planning, fire-prevention; training for help in emergencies and natural catastrophies, traffic education and self-protection
24. Increase community participation in town and country planning: roads, sewerage, land-use, housing projects, public transport, etc.
25. Study and improve youth employment services, guidance and counselling
26. Study and/or improve facilities for retraining of redundant workers and unemployed youth
27. Provision of play streets without traffic
28. Set up a UN or UNESCO club or information centre
29. Conservation and documentation of ancient buildings and monuments, historical sites or places of natural beauty
30. Write a town or local area brochure (listing the existing problems and giving inside information).

II. Integration with the Subject Syllabus

Although there is a trend towards interdisciplinary studies, most teachers are still in situations where, at a given hour of a given day, they are required to teach a subject, be it math, history or chemistry. And, the pupils come prepared to have their lesson in that subject - as preparation for the subject exam which awaits them at the end of the term.

Despite these typical limitations, the project teachers have found it possible and useful to integrate their required syllabus with various units and elements from this experience centered curriculum. This section indicates some of the ways this has been done. The statements here are of a rather general nature. More specific applications are suggested as part of the first four units, those described in detail, in Section V .

Social Studies

To the extent that social studies already combines history, geography and civics (political education), most of the units in this curriculum are relevant. What the units may add to the usual social studies syllabus are concepts from individual and group psychology and projects in the community. For example, there is often a unit in social studies on transportation and communication. The distribution of cities and town may be discussed in terms of their needs for adequate transportation and communication links with each other. Much will be gained by the pupils if the 'straight' informational approach is integrated with a set of experience situations which explore how individual lives in various strata of society are affected by transportation and communication facilities.

For example, with the Ideal Group unit (see page 53), the pupils experience and discuss their need for friends, the idea of togetherness, as well as the pressure one sometimes can feel towards getting away from others. From this view of transportation and communication for personal reasons, the teacher can move to the relation of these facilities to the economy. The unit Export-Import (see page 51) can be used: Through personal or telephone contact with import-export companies, pupils can learn how the means and costs of transportation affect decisions in international trade. Additional aspects of the general topic can be developed from units such as Foreign Residents and the Fantasy Trip.

In a similar way, various experience situations can be related to traditional subject matter of communications. Concepts which relate communications to the nature of man and society and language can be developed with the Rumour Experiment, Loaning Words, Passing Notes, Understanding (Speaking Listening), and Who Said It?

An interesting ending (or beginning) to a unit on transportation and communication can come with the future-oriented experience situations: Scenario on City of the Future, Ideal Community (Society) and The Year 2000.

Finally, there are many worthwhile Action Projects and Community Survey studies connected to transportation and communication. (See list, page 18). In many places the needs of all people are not being met adequately by the existing facilities. Useful learning situations will occur with surveys that document peoples unmet needs, and action campaigns that seek changes in, for example, bus routes or schedules, or radio programming for the elderly.

Biology

Two, seemingly opposed, trends characterize present day biology: increasing narrow specialization, and a broadening and integration. Although

the biological focus of this curriculum approach is more directed towards the integrative aspects (ethology, behavioral biology, evolution, ecology), there should be ample encouragement for the pupils to explore quite narrow interests (biochemistry of retinal pigments in colour vision).

The central issue, at any 'level' is the relationship between man and the environment. For example, the question may be: is it unhealthy for people to live as crowded together as they are in cities today? What are minimal and optimal space needs for a healthy person or family? Does crowding, by itself, cause increased nervousness, shorter life-expectancy, higher incidence of respiratory diseases, etc.? Information related to such questions has come from a wide variety of sources: studies of crowded rats and of lemming populations that periodically run into the sea and drown, of health statistics, psychological surveys, laboratory experiments with humans, observational studies of social interaction along city streets, archeological investigations of ancient cities, ecological data on changing distributions of animal populations, social-psychological studies of crowd behavior, etc.

What begins as a simple question easily becomes overly complex. As this is typical of man-environment relationships, it emphasizes the need for some underlying concepts which we can use to organize the information. In the curriculum units, the three primary concepts which are related to biology are perception, communication and action (decision-processes), and the emotional or 'valueing' component which is involved in the interaction of all three.

Within the framework of a biology syllabus, many of the units from this curriculum can be structured to focus on the biological nature of man, aspects of man as a species. There are specific suggestions on this in the unit descriptions, especially: Four Hands on the Clay, Blind Trust, What is Man, Level of Aspiration and the Rumour Experiment. Other units that are relevant to the three primary concepts are:

(a) Perception - Necker Cube; Rotating Trapezoid; and Being an Animal
(b) Communication - Films; Learning, Shaping and Reward
(c) Action - Group Problem Solving; Peaceful Negotiations; Reaction-Time; Finger-Maze; Learning to Think and the Ideal Group
(d) Emotions, values - Guilty or Innocent, Ideal Community.

Literature, Writing and Language

In the enjoyment of literature and the writing of it, one steps out of one's own shoes and looks at the world through the eyes of others. This process is central to the approach in the curriculum. After participating in one of the experience situations, a pupil listens to others describing and analyzing the activity that she/he knows so well:

> Jan thinks about what it must have been like for Marie and Nina. They so beautifully worked together on the clay, (Four Hands on Clay, page 33) they had a feeling of complete communication just through their moving fingers. His own experience with Julie was quite different, more like the frustration that Ingrid described. Walking home after school and, later, telling his family of the exercise, he again reflects about the different experiences of his classmates and himself.

The shared activity of the experience situations and the description and analysis process during the follow-up discussion, provide training in seeing both oneself and others more fully. It is the 'both' which is critical: there is a strong link between the increased understanding of oneself and others. The application of this understanding to literature and writing develops as the pupils work through a variety of the curriculum units, increasing their sensitivity along the way.

A more direct approach to this application is also possible. The indecision of Hamlet - it's emotional effects, its source in uncertain and insufficient information - is experienced in many different forms by pupils during their activities and discussions. As another example, the concept of level of aspiration (from the unit of that name) is an underlying theme of many stories and autobiographies, including the writings of pupils. Similarly, the unit Self-Concept (page), I am Me relates to the common literary theme of one's search for self-identity.

This more direct application of the units to literature and writing can proceed in two ways: (1) When the teacher assigns a specific book for class reading, one or several of the experience situations can be used to illustrate the themes and events of that book. (2) Alternatively, the class can begin with an experience situation, get involved in exploring a particular concept or theme, and then follow that up by reading one or several stories that are related to it.

The jump between an experience situation and a book may involve a level of abstraction and generalization which pupils are not yet able to make. The use of role-playing is then quite effective and more direct method. Situations from stories, including scenes not directly described, can be role-played.

Physical Sciences

There seems to be something about studying physics and chemistry which gets these scientists interested in the nature of man. Many of them have written important philosophical works. And, in practice, there are a large number of critical contact points between the physical and social sciences; some of these are treated in the curriculum units. The two primary topics are: (1) the physics of sound and light waves as they relate to seeing and hearing; and (2) man's conceptions of physical causality, his explanations of the physical world, especially as these relate to our own decision-processes in daily life.

In the curriculum a series of perception experiments initiate questions about the physics of sound and light. Our understanding of the functioning of the eyes and ears depends upon a knowledge of the properties of light and sound waves. Interestingly enough, the reverse is also true. For example, the Colour Committee of the International Union of Physical Sciences, when faced with the task of defining colours, of setting standards for 'red', 'blue', etc., had to use man as the standard. Our eye, not a physicist's measuring instrument became a critical part of the definition. Much of the early history of scientific psychology is concerned with psychophysics - the study of the relationship between our perception and the 'real' world. The major issues of psychophysics are involved in the discussions and follow-up projects to the series of perception experiments (Necker Cube, Rotating Trapezoid Illusion, and Multistability in Perception) and also in the units, Blind Trust and Four Hands on the Clay.

The second area, man's conceptions of the physical world, is the central concern of the unit, Learning to Think. Piaget has designed a fascinating series of test situations for children. They demonstrate that we begin life with mistaken conceptions about the basic properties of the physical world. Many of these ideas don't get completely straightened out until we are about 12 years old. Pupils have used these same tests with younger children to study the nature of this slow developmental process. The pupils are surprised to learn that they were also 'so dumb' when younger.

As with other aspects of this curriculum approach, such topics are not intended for 'academic' study. Thus, in this case, the pupils are oriented to the usefulness of a knowledge of physics and chemistry for their own decision-processes. For example, what we ourselves eat, and what we decide to feed our children, is influenced by our evaluation of scientific reports on the harmful effects of many food colouring substances. Also, decisions about selecting a car, one's driving speed and use of seat-belts are influenced by our knowledge (or beliefs) of the laws of inertia, the strength of metals, and flammability of petrol.

Finally, in the out-of school work of the curriculum, the community action projects, the pupils will soon discover that many political decisions are justified on the basis of scientific and technical matters. A situation in which those on opposing sides of a political issue are each quoting their own scientific sources is a forceful demonstration of our everyday need for a solid education in basic and applied physics and chemistry.

Mathematics

Today's social scientists are users of advanced mathematical techniques. The complexities of the individual, and of the multitude of individuals that make up a society, can not be analyzed without using quantitative methods. But making accurate measurements of humans and of our behaviour is often quite difficult and controversial. However, important aspects of our lives depend upon how governments use the outcomes and predictions of such measurements. Thus, some knowledge and skills with this topic are an important part of a pupil's education.

The curriculum units offer a number of opportunities for covering this area. The primary focus is on the data (results) obtained in the experiments and the questionnaire surveys. For example, from the unit, Exploration of Normal Behavior (and Reaction Time) the pupils gain experience with the most common mathematical formula used for describing human behavior - the "normal distribution curve".

In other discussions they will ask a question such as: "Do girls do this faster than boys?" In their own class it was true, but perhaps they are not <u>representative</u> of <u>all</u> boys and girls. This raises a quite simple concept from statistics - when is a difference significant - and pupils easily understand it (even without learning the mathematical formula for testing significance).

In most schools, pupils are personally involved in the way human behavior is measured.....they are given exams and marks. The unit, Learning, 'Shaping', Reward develops the concept that some (or all) of our learning and behavior is 'shaped' by the positive and negative rewards we receive from others. A discussion of the application of this concept to exams is worthwhile. How have our concepts of (and attitudes towards) the individual differences in humans been dependent upon the fact that certain human characteristics can be more easily measured?

(see Level of Aspirations, page 37). What are the reflections of this in the social differentiation of people? Yes, math is important!

The Arts

One philosopher has argued that a scientific theory of our emotions should be based on an analysis of art and the artistic processes (rather than come from the psychology laboratories and the therapists 'couch'). The artist seeks to communicate his/her personal reactions - to people, situations, objects, the milieu. Thus, there is a strong individualistic aspect to creative work. But styles of art also reflect the social and cultural influences upon the artist (whether he/she accepts or rejects these influences). The whole process mirrors a main theme of this curriculum: our identity as subjects and as objects; as unique and as universal; as holding many memberships and playing many roles.

The pupil who is deeply involved in art - as creator and as viewer-listener - is in touch with many 'layers' of human experience that are hidden to those denied this experience.

As a curriculum seeking to develop open and free expression and to increase awareness of the 'filters' we place before our eyes and ears, we share a common playground with the arts. The games and activities of both can and should involve a continual interchange. The creativity of the teachers and pupils, getting into the spirit of fantasy and imagination with a variety of the units (the Scenarios, Being an Animal, Four Hands on the Clay, Blind Trust, Year 2000, Fantasy Trip, Humour, Fortune Telling, New Language) - all this can result in good art, good times and good education.

Scattered throughout the unit descriptions are more specific suggestions about this.

III. The Teacher and the Emotions of Pupils

In implementing this approach there is likely to be some uncertainty about its potential harmful effects. Its change in emphasis - from human beings as subject matter in the humanities and social studies to human beings as you and I - can be seen as an overemphasis on the teacher's responsibility for handling the psychological problems of the whole class. Experienced teachers and heads often talk about the generally bad effects on a class of a teacher who uses much class time being an 'emotional mother' to 35 children.

As an illustration of varying teacher reactions to pupil's emotions, the following examples are given:

The school day begins with the history lesson: some events from Country X - the failure of the Queen's plot to replace the King, the King imprisoning his wife, and, five years later, the assasination of the King.

The teacher, Mrs. T^1 asked some questions about all this and the bright pupils were able to answer them. Mrs. T^1 kept most pupils interested by telling a few unusual and funny stories of relevant historical incidents. However, even this failed to interest some. Mrs. T^1 noticed that Maria was day-dreaming and that Peter was furiously drawing a picture. So, Mrs. T^1 applied her psychological insights, realized from what she knew of the family backgrounds of Maria and Peter (and the violence expressed in Peter's drawing), that what had happened to the King and Queen had an especially strong influence on these two. Being too busy dealing

with their emotions, they were unable to deal with the lesson. So, Mrs. T^1 put the rest of the class to work reading from the history textbook while she applied all her psychological skills to the emotional problems of Maria and Peter.

We switch now - a different teacher, Mrs. T^2, with the same history lesson and class situation. Mrs. T^2, as soon as she saw the negative influence Maria and Peter were having on the rest of the class, decided to punish them. This did allow Mrs. T^2 to get on with the lesson, but now her funny stories failed to get much response from the pupils; she was discouraged and angry at Maria and Peter and at history.

Yes, there is a Mrs. T^3, and she is using our experience-centered approach. Thus, she feels that the value of the history lesson is increased if the pupils can place themselves within the historical situation - feeling the conflicts, making the difficult decisions, experiencing its complexity. She uses two experience situations for this. The first, Level of Aspiration (see page 37), is a short and simple experiment that introduces the idea that not everyone wants or expects to achieve the same things in life. After discussing their own reactions to this experiment, the pupils get back to history, finding that the application of <u>their</u> ideas and experiences with 'aspirations' to the historical aspirations of the King and Queen is quite challenging. Mrs. T^3 then involves the pupils in some of the emotional content of the historical situation. She has the class close their eyes and relax, opening their minds for fantasy, while she slowly narrates the Cat and Mouse Scenario (see page 66). The pupils experience being both all-powerful and powerless, with feelings of helplessness and fear.

One pupil, in the discussion that follows, draws a comparison with the pupils powerlessness in the school situation; another remembers the class 'bully' of a few years back while someone else talks about parents hitting children and women's liberation activities as a fight for equal power. Mrs. T^3 has them look at the personality of the King, given total power but still dependent upon cooperation of others (as the teacher depends upon the cooperation of the 'powerless' pupils). What does it feel like to be a husband mistrusting and imprisoning one's wife; or, being the wife? What feelings of power come from arranging an assasination of a King? Does all this tell us something about the power of dictators today? (And wives and pupils?).

This example is presented to illustrate the differences between using psychology <u>on</u> children (Mrs. T^1 and T^2) and developing a classroom approach that uses psychology and sociology <u>for</u> creating experiences and insights. A climate can be created that doesn't seek to alienate the pupil from her/his own emotional reactions but that integrates the whole child into the learning situation (not just the social situation of the class). This serves to diminish the inevitable effects of blocking emotional expression - the aggressiveness and cruelty, the explosive playground behavior, or the passivity and day-dreaming.

Thus it is that during these past two years the project teachers, the Mr. and Mrs. T^3's, have got over their initial hesitancy and fear about harmful effects. They report no bad experiences and a wealth of excitingly good ones. Good ones in a social <u>and</u> academic sense. Concepts like power, trust, aspiration level, and sex roles help in understanding both one's self <u>and</u> one's surroundings, for <u>applying</u> the knowledge of history. A deeper and more useful understanding comes from seeking explanations that take account of the 'personality of power', the leader as shaper of history and as pawn at the top of inevitable social forces. But such explanations become intellectual games if not tied to the reality of the pupils' own existence.....including his/her emotions.

IV. Variations with Age and Contexts

A. Above Age Eleven

The biological and psysical changes of puberty and adolescence are paralleled by psychological and social changes: an increasing interest in the opposite sex and in one's own self-identity, including aspects of jobs, further education, marriage and a philosophy of life.

There is also a development in thinking processes: an ability to see situations from another's viewpoint and to draw rules or concepts from concrete examples. The content and approach of this curriculum relate to these processes for pupils above about eleven years of age. They are highly motivated by the content and soon learn to use the discussion technique - to generalize, develop concepts and shift their viewpoint - in going from a descriptive to an analytical examination of the experience situations.

Our experience points to an age of about eleven as most satisfactory for first introducing this approach. Older pupils have already developed a self-consciousness that tends to inhibit their spontaneity in the experience situations and their openness in discussions. Thus, it is advisable with those above about fourteen to introduce the approach more slowly and consciously, including periodic class discussions of the method.

B. Below Age Eleven

With pupils below eleven the discussions are more limited and concrete. Most of the content of the discussion will be the experience situation itself. Applications to real-life situations will generally come from their own personal experiences. There will be fewer opportunities to develop follow-up activities. More of the learning will come directly from the experience situations. The young pupils will often want to repeat these. Such repetition often is quite good. With the second or third run-through of a game situation the excitement diminishes enough for the pupils to develop more concentration on the ongoing individual and group processes.

Some of the experience situations should be simplified for use with this age group.

C. After-school Youth Groups

The units and approach are well suited to after-school activities and informal learning situations. Once away from the schooling milieu - subjects, textbooks, examinations, 55 minute periods - the participant's involvement, fantasy and creativeness are typically greater. It is also easier to develop the follow-up activities, especially the community action projects.

With after-school groups whose specific purpose is community work, the curriculum activities can deepen the benefits derived by the participants. For example, when youth are working in hospitals and institutions for disabled children, they often become quite frustrated and angry with the institution's rules and impersonality. Units such as Group Pressures, Learning, Shaping and Reward, and Role-playing have been used to explore the social and interpersonal processes that characterize institutions as bureaucracies. Also, if one is to direct the participants' frustrations and anger into efforts for improving these institutions, units can be selected with this in mind. Communication skills and an appreciation of

the complexity and emotional aspects of institutional processes can be developed with units such as Peaceful Negotiations, Rumour Experiment, Ideal Community and Shifting your Viewpoint.

D. Teacher-training (Pre-service)

In relation to pre-service teacher training, the approach and content of this curriculum have been used in several ways. (1) For a course in educational psychology the units served to illustrate basic psychological concepts of child development, learning, perception and individual differences. At the same time, the students experienced a teaching approach that is consistent with these principles.

(2) The units have also been introduced into curriculum studies courses as one example of innovative approaches. Here, the fact that much of the curriculum was developed by teachers gives it a special importance. Teacher-trainees have worked with the method by developing their own units and trying them out with each other. The teacher-educator is thus able to avoid the dilemma of lecturing about the evils of the lecture method.

(3) Teacher-trainees whose subject areas are social studies, environmental studies, foreign languages or integrated studies have been introduced to the materials as content and methods to be used in their practice or later teaching situations. There is enough flexibility in the curriculum that it can be a useful part of a wide variety of subject courses in teacher-training.

Comments on in-service training follow in the next section.

V. Teacher Training (in-service)

For a teacher to whom this approach is quite new, some training with the method will be quite useful. The experiences described indicate a wide variety of possibilities for this. The original project teachers began with a 9-day workshop. Since then, with the increase in classroom experience, under widely varying conditions, training can be based more on reality and less on speculation. (And the materials have undergone two revisions).

The training of additional teachers has taken place in the following types of situations:

a) several short presentations have been made of the curriculum approach before groups of teachers. These have been more successful when the teachers are from the same school. Then, the interested ones can form a working group to support and assist each other.

b) The teachers from the first workshop and those attending subsequent training situations have interested colleagues within their own schools, assisting them in trying out a unit. Results reported from this informal on-the-job training have often been quite good.

c) Individual efforts - many teachers have been attracted to the approach on the basis of their own experiences. They have read the Teacher's Training Manual and a set of the Units, then decided to try out one or two...and see what happens. As far as can be judged from some of the written reports and letters about their class experiences, this has largely been successful, even assuming that you don't hear from the failures.

While it is obvious that a solid week of teacher-training is beneficial before beginning and, again, a year later, it has also seemed that the approach and exercises are simple enough that worthwhile outcomes are also prevalent with little or no additional training for the already experienced teacher. One suspects that this is largely due to the fact that the teachers have made thair own decisions about trying it out. The curriculum has never been 'spread down' from the top and, right from its beginning, has been largely a teacher-developed project.

One final point about teacher-training is that the classroom method itself encourages the teacher and pupils to train themselves together. In the course of the discussion after the experience situations, the teacher-learning method itself is repeatedly discussed. Thus, a system is in operation for continued improvement of everyone's classroom skills through the 2-way feedback of reactions and results. In-service training within the classroom is far more efficient than in academic courses or teaching laboratories. It takes place 30 hours per week at no additional cost; there is no transfer loss between the training and its application to the classroom; the 20-40 'supervisors' are constantly in attendance, are vitally concerned about improvement, and offer advice from many different viewpoints.

We have also learned from the evaluation study on the project that good, traditional, authoritarian teachers are quite able to develop, mostly by themselves, into good, open classroom teachers, still with authority, but no longer authoritarian. This kind of change has come with a 1-2 year classroom use of the curriculum units. Those teachers who have changed in this way are today the most ardent supporters and creative critical thinkers for the continued development of the programme.

VI. The Project Evaluation Study

When this project began it was impossible to know what would happen with it. The situation was complex - teachers of different subjects, pupils from 11 to 18 years of age, and widely varying school systems in the eight participating countries. Yet, as a pilot project, we hoped to begin a long-term development process of continual revision and improvement and to demonstrate possibilities for wider application. To help accomplish these long-term goals, we sought feedback and evaluation information that would be helpful: internally, to the teachers and pupils developing the materials and approach; and externally, to the administrators and teacher-educators considering the value and applicability of the programme. For these two purposes, evaluation data was continually gathered from the participating schools and from the series of external contacts generated by the project's existence; for example, presentations at educational conferences and teacher-training seminars. This information has been useful in revising the curriculum units and in preparing this publication. It also served as a background for the discussions at the second workshop (Tremsbüttel) when a further expansion of the project activities was planned.

It is possible here to summarize only some main points from all the evaluation data. A complete report is being prepared by H.-M. Müller-Wolf for publication by the Unesco Institute for Education, Hamburg.

Information about activities in the schools came from three sources: (1) the project coordinators observed the teachers and pupils during visits to the schools at the beginning and end of the 1972-1973 school year. These visits included discussions with pupils, other teachers and the headmaster. (2) After completing a unit of the curriculum, the pupils and teachers often wrote an evaluation including suggestions for improvements; and (3) a long questionnaire was developed by Müller-Wolf for administration to the pupils in the participating classes and to several matched 'control' classes at both the beginning and end of the school year.

The questionnaire was designed to measure several aspects of attitudes, learning, behavior, relationships and classroom atmosphere which may have changed in those classes using the curriculum. In all, fourteen variables were measured. Of these, nine showed changes in the pre- and post-test comparison that were significantly*) greater than comparable changes in the control classes. These results are summarized below:

1. Teacher-pupil Relationships: the pupils' rating of their teachers changed significantly (5% level*) in terms of increased empathy and understanding. The pupils also feel more respected and accepted.
2. Class Atmosphere: There were significant increases (5% level) in the pupils' rating of class homogeneity (as against cliques) and their own feeling of being integrated into the class as a whole.
3. Learning Readiness: The effects of the curriculum seemed to spread to attitudes about school learning as a whole, with a significal (5% level) increase in positive attitudes about not being forced to learn too much and doing take-home work.
4. Anwiety: There was a significant decrease (5% level) in the pupils' ratings of school and 'general' anxiety.
5. International Understanding: The pupils' report an increased readiness (5% level) to associate with pupils and families of foreign nationality. However, this was only true in terms of group relationships, not person-to-person.
6. Reactions to Conflict: The questionnaire included descriptions of three conflict situations followed by open-ended questions about the pupils' reaction and what their classmates would think of this reaction. For example, one situation was: What do you do if you see a member of your class being unkind to a younger child? The pre- and post-test comparisons for all 3 situations showed a significant increase in social sensitivity (1% level, empathy, acceptance, respect,'genuiness') and social competence (10% level, actions taken and attitudes communicated).

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*) The Wilcoxon H-test was used for the statistical analysis. The changes are significant at the 1%, 5%, or 10% level of error probability as shown.

Other variables from the formal questionnaire showed pre- and post--test changes in a positive direction, but too small to be of statistical significance (between 15-30% levels of error probability). These were as follows: (1) appliciability of school learning to later life; (2) pupil's authoritarian vs. democratic models of desirable teacher--behavior; (3) level of aspiration for later life; and (4) identification with parents and teachers as models.

The statistically significant changes in the formal questionnaire results are supported by the more 'informal' data gathered from pupils and teachers and by the comparisons of class observations made at the beginning and end of the school year. This was especially true for the changes in teacher-pupil relationships, class atmosphere and learning readiness.

These favorable outcomes within the classroom were obviously useful for developing the wider implications and application of the approach and curriculum. The participating teachers have worked with interested colleagues within the schools and neighboring ones. Several have written articles about the project for educational publications. Both teachers and the project coordinators have participated in conferences and seminars related to teacher-training and related concerns. One outcome of these activities has been a widespread distribution of the project materials and a considerable increase in the number of teachers known to be using them. The evaluation study has also attempted to assess the achievements and difficulties with all of these activities. The data for this is drawn from evaluation questionnaires used after workshops and seminars and from teacher's 'diaries' and correspondence.

The evaluation study, as a whole, has highlighted some problems. For example, the teachers and pupils feel they have too little time to utilize the full potential of the units. There was often little opportunity to work properly with the international exchanges. Also, some classes have found it difficult to learn how to effectively use the discussion following an experience situation. Teachers have requested that the unit descriptions be more structured and expanded and with materials to support the follow-up activities. Some of the units need major modifications for use with younger pupils.

The period of formal evaluation of the project activities has ended; its results are being applied to present and future developments. In these, too, we will continue to be guided by feedback and evaluation results, whereever and whenever feasible.

VII THE UNITS

A. BLIND TRUST

Procedure

The class divides into pairs; one is 'blind', with eyes closed or well covered, the other is his/her leader. The pairs are instructed to walk around for about 10 minutes; depending on circumstances, this can be inside and/or outside. Doing both is better because of the greater variety of experiences possible. The instructions must include: (1) no one is to talk during the whole exercise; (2) the leader should not turn the walk into an obstacle course for the blind pupil. Sometimes there is a tendency to 'tease'. Rather, most of the walking should be fairly easy and the leader should try, instead, to be creative in finding a variety of experinces for the blind pupil such as trying to identify objects by touch, being left alone for a few minutes, running (on smooth ground) and being exposed to a variety of sounds. The teacher can mention

these possibilities specifically but it is better to just ask the pupils to use their own imagination for creating a variety of experiences.

After about 10 minutes the pairs switch roles and continue their walk for another 10 minutes. The teacher can ask for this switch to take place in the classroom or let the pairs decide.

Variation

The pairs don't know who their partner is. Half the class covers or shuts their eyes. The other half are the leaders and pick their partners from the blind group without any talking. After the 10 minute tour, all pairs return to the classroom and the selection process is then repeated with the leaders being the blind group. In all other respects the procedure and instructions are the same as above.

Discussion

Concepts:

a) We are all born with total trust ... and then, what happens?

b) relationships between trust - mistrust and dependency - independence.

c) dependency - what are our reactions to being dependent?

d) communication of emotions through bodily posture, movement and tension.

e) role of past experiences in trust - mistrust.

f) unfamiliarity and mistrust ... increasing mistrust of those more unlike oneself, e.g., oposite sex, social class, racial and cultural differences.

g) earn trust, earn power.

h) sensitivity to the environment - how did one' awareness of the environment change with loss of sight?

The trust walk is generally a strong experience for pupils. They come back wanting to talk and it is quite useful for the teacher to stay completely out of the discussion at first. The pupils begin talking about the events that took place. But the experience has emotional effects, i.e., feelings of fear, helplessness, trust or mistrust in one's leader, responsibility for another's safety and guilt if there was an accident; and, for those few who relax completely while blind, a marvellous feeling of freedom and release from decisions. If the pupils spontaneously discuss these emotional aspects, the teacher can help them explore the meaning and significance of their feelings. However, if their discussion remains only with the events, their own avoidance of the emotional components can be pointed out to them ..... as a starting point.

In going beyond the concrete experience, some of the concepts from the list can be brought into the discussion. These are easily related to pupil's experiences with their friends and in their families, in school and community. But he discussion should also get to the workings of the social system and the concrete ways different social institutions handle trust and responsibility. For example, factory workers punch time cards;

we can't purchase drugs without a doctor's prescription and the doctor puts his medical certificate on his office wall; also, do we have standardized national school examinations because teachers can't be trusted to evaluate pupils? How are rules related to mistrust? ... family and school rules, safety regulations for food, medicines, traffic, etc. How are immigration laws related to mistrust? Can we imagine what a society would be like if there was complete trust amongst all persons? Is there such a society or group? Are there racial, cultural, social class and national differences in the level of trust amongst the people? Why?

If the pupils have been both indoors and out, they may be interested in a discussion of feelings about environments. Was there a change in awareness of air temperature, sounds and smells when going outside? In what ways does one suddenly become more aware of the environment, and how do our different senses contribute to this? Do you remember places that looked beautiful but the temperature, sounds or smells were terrible, or the activities of other people spoiled the atmosphere? Why do certain environments, both indoors and out, effect us emotionally?

Follow-up Projects

1. Family - Pupils do a study of changing (or unchanging) family patterns related to trust and mistrust. They compare their 'rules' with those their parents and grandparents had as children. Additional data sources: autobiographies, novels, books for parents on raising children. This could be followed up with a parent-pupil evening meeting which began with a trust walk and then, in the discussion, ended up with experiences and feelings about family and school rules as they relate to responsibility and trust. A meeting of this kind is useful in introducing parents to the ideas of the curriculum approach.

2. School - Similar to 1. except that the subject is the school.

3. Senses - Repeat the blind trust walk but for the purpose of exploring the human senses. Before beginning the pupils are instructed to concentrate on their other senses and they may try to see if they can tell when they are approaching a wall. Most will experience sounds as extremely loud and this is an example of how our brain's system for selective attention involves inhibition of sensory input. Some pupils may want to try a trust walk without vision and hearing. About the only practical way to eliminate hearing is to have the pupil carry a small transistor radio with an earphone in place and the volume (of music) turned up high.

4. Lending Money - Design and do an experiment on interpersonal trust. For example, see if strangers will lend money with a promise of mailing it back the next day. What difference is there if the pupil needing the money is a boy or girl, is neatly or sloppily dressed? Are old or young, males or females more likely to lend money? Make hypotheses about the results before gathering the data, and then make a theory. There are many other kinds of interpersonal trust situations which can be studied experimentally.

5. Secrets - Can you trust fellow pupils (or teachers) to keep a secret? Design an experiment to examine some of the factors which influence this. For example, are girls more likely to keep secrets about other girls, but pass is on if it's about a boy? It the same thing true between racial, religious, ethnic and social class groups? Why?

6. International Mistrust: Spying. There are commonly accepted diplomatic procedures for handling exposed spies of another country. As the Stalin purges of the 30's and the Watergate affair demonstrate, spying also takes place within a country. The mass media are filled with spy stories, both factual and fiction. A project on this could examine some of the political, psychological and moral aspects of spying.

7. The United Nations system and other international institutions (e.g., International Court of Justice) can be examined as ways of handling trust and mistrust amongst nations.

8. Managing conflict where there is little or no trust: black-white in USA, Catholic-Protestant in N. Ireland, Arab-Israeli. Do a 'case study' comparing conflict management situations with and without a loss of trust. Refer back to the pupil's own emotional reactions during the trust walk for an understanding of the emotional component.

Applications to School Subjects

Language: the trust walk itself has been successfully used as a means of giving pupils a shared experience to initiate an active conversation in a foreign language. One can also compare languages by listing all the words and expressions concerned with trust and mistrust. Does such a comparision say something about differences in national character. (Partial list from English: Confidence, faith, suspicious, wary, liar, reliance, support, uphold, responsible, doubtful, gossip, believable, team spirit, solid citizen, teacher's pet, tattletale, stool pigeon, con man, informer, speak with a forked tongue)

History: projects like 1, 2, 6, 7, and 8 are relevant to history courses. A historian has labelled the 20th Century, "The Age of Anxiety". Does mistrust cause anxiety?

Geography and Environmental Stueies: do a comparison of aspects of trust-mistrust - responsibility with the different kinds of man-environment conditions; e.e., Eskimoes, isolated mountain villages, repetitive natural disaster areas, urbanized regions, small islands, etc. How do our feelings change in different man-made and natural environments, e.g., tiny and huge rooms, candle and fluorescent light, top of a mountain and deep in a valley? Are the different kinds of dwellings people live in an indication of their trust in others?

Biology: Is trust necessary for co-operation? Look at co-operation-competition, the hunter and the hunted, in different animal species. Is fear and mistrust an instinct or is it learned, or both? What is the physiology of the emotions the pupils felt on their blind trust walk? Project 3, emphasizing sensory reactions and the selective attention and inhibition process, is especially relevant to biology. How do the sensory worlds of different animals compare? We know little scientifically about the pleasures of sensation but it's an interesting and important topic for biology and moral education.

Literature: the trust walk is a useful beginning to some of the extensive literature in which trust-mistrust are the basic theme. It may also be related to stories of the blind or deaf. Pupils may also use it as a theme for writing stories or poems or act plays - autobiographical and fictional.

Arts: Paintings, sculpture and music often illustrate aspects of trust and mistrust, e.g., mother and child, Edvard Munch's paintings of women, songs and operas about "love betrayed".

We 'trust' the arts (although in some places artists are mistrusted). By this I mean that the vast majority of creative works appreciated by the public follow accepted rules of aesthetics. Combinations of colours, architectural forms and musical harmony please us because they are familiar and predictable enough. How do we react when the artist violates these regularities?

Some regularities seem universal (e.g., rhythm, geometric designs) while others vary greatly in different cultures (e.e., significance of black and white in Asian and Western nations, intervals in the musical scale). The arts are part of our complex communication processes, all of which depend upon following accepted rules. When we are unable to understand the meaning of another persons verbal communication, if it just seems to us like lots of words that don't make sense, our diagnosis is likely to be of mental illness, schizophrenia.

B. FOUR HANDS ON THE CLAY

This exercise illustrates some of the processes involved in co--operative decision-making between two people. By eliminating sight and sound while working with an unknown person, many elements in this process are highlighted while the uniqueness of the situation insures strong involvement.

I. Equipment

One large block of clay for each 2 participants. The blocks should be about two litres in volume but smaller blocks can be used if necessary. The clay should be soft enough for moulding but hard enough to hold its shape, and not too wet. Natural clays are generally better than the plastics which tend to be too hard in a block.

II. Procedure

The initial introduction to the class should be of this kind: "In this exercise you work in pairs, with a partner, but you do it with your eyes closed, and with no talking, and you will not know who your partner is. The task is for the two partners to make something from the clay".

The clay blocks should be distributed around the tables so that partners can sit opposite each other with the clay between them. If possible, the pairs should not be too close together.

The pupils are then asked to remove watches, bracelets and rings and to roll up their sleeves. The pupils are then lined up along one or two walls and the following instructions are given:

"Please close your eyes and try to keep them closed throughout the exercise. Also, from now on there's to be no talking, or laughing, or making of any noise which would allow others to identify who you are. Once everyone is quiet and with eyes closed, I'll begin leading you, one-by-one, over to the chairs by the clay. When I've put two partners opposite each other, I'll place their four hands on the clay and they should begin making something together. Does everyone understand? Okay. Eyes closed, no sounds".

There are various approaches to arranging the pairs. Since the pupils almost always ask the teacher how she/he chooses pairs, it's good to decide this before beginning. Some teachers like to arrange the pairs for what they feel will give interesting results while others purposely use

a system which makes it obvious to the pupils that they have not been 'arranged'.

The problem of an uneven number of participants has been handled in several ways: the teacher can participate, a volunteer can be gotten from another class or you can put 3 pupils together in one group.

The pairs will typically be about finished in 15-20 minutes, at which time ask them to open their eyes. An organized class discussion should be delayed until after the pupils have had a chance to talk with their partners and to move around with them, joining the discussion.

III. Discussion

A broad question such as, "What was it like?" will get the class talking about what happened. This can be followed with more specific questions directed towards those describing their experiences. With the first few pupils the teacher will probabaly need to ask the questions. But then this responsibility should be turned over to the class as a whole. These questions can focus on three aspects of the exercise: decision processes, communication and feelings.

1. Decision Processes. How was the decision reached about what to make; was it a joint decision; did it develop from interaction with the partner or was a choice made already while waiting to be seated; what determined the choice, etc.?

2. Communication. What were the kinds of communication that took place between parnters; were there times when you were trying to say something but other times when the communication 'just happened'; did communication ever really stop; wasn't doing nothing, stopping work, a good form of communicating; were feelings being communicated between partners; how; etc.?

3. Feelings, Emotions. Starting right from the time the pupils listened to the instructions, have them think about their feelings -- during the decision period about what to make, during the making, when things were going well and/or badly, their frustrations (or pleasures) from not talking and seeing, their reactions to an unknown partner - any of this which they want to share with the class should be encouraged. Feelings are always harder to talk about but this exercise is different enough from usual situations, far enough removed from 'reality,' that many pupils find it easier looking at their emotional reactions and sharing them openly.

Another interesting aspect of the exercise is the effect of working with an unknown partner. Were many guessing about their partner? What would be the difference if they knew? Was it important to know if the partner was a boy or girl? Do we play different roles with boys and girls and with people we don't know, strangers?

After covering the events of the exercise itself, the discussion should be continued by picking up one or more of the 3 aspects and developing and applying the concepts to real-life situations. Section VI contains some suggestions for this and the follow-up projects also contribute.

IV. Variations

1. The exercise has also been done with some of the pupils as observers; perhaps, one observoer for each working pair. This introduces

a more personal element into the discussions (and saves clay). For this reason it is probably better done this way after a class is quite relaxed and open with each other. And, it may be better to have the observers give their feed-back to the individual pairs before the whole class comes together for discussion. With the class together the participants can discuss how they felt being observed, and the observers, how they felt observing.

2. Play some music during the exercise. Think carefully about the selection. Play it softly, but you may want to slowly make it louder and softer for a few minutes.

3. This is an excellent unit for videotaping or photographing with a movie or still camera. The videotape playback can be a powerful experience. The beauty of working hands is quite striking; and I can recal a nervous, ugly-looking pupil who changed appearance dramatically before the clay - his absorption and pleasure with the task and his good contact with his partner transformed his face into one of serene beauty. The pictures or movie film are also excellent for the international exchanges.

4. Repeat the exercise with groups of three.

5. Some pupils may feel that, with all the discussions, the experience is being 'analyzed to death'. The pleasure they had making their object together can be spoiled by too much talk that keeps picking it apart and asking why and how. One way to respect this feeling is to set aside a time for quiet reflections about the exercise. This could include writing thoughts and feelings, as a composition or poem, or making a picture. After the class has finished the exercise and talked freely with their partners and classmates, the class can be split up into those who would like to be alone with their thoughts and those who want to remain for discussion.

V. Follow-up Projects

1. Decision Processes with Increasing Size of the Group: Design an experiment where a group has to come to a single decision. Then split into class into groups of three, for their first decision, then into fives, for another decision and finally, nine. Have an observer for each group to report on communication patterns, roles in discussion, emotions, etc.

2. Information and Decisions: All of these experiments should be related to real-life situations. Contrary to this experiments, in many real-life situations, we have some control over the amount of information that we apply to the decision process. Since the topic of using information, applying knowledge for decisions, is important throughout this approach and arises in all the units, only one project will be described here. This is a study that can be done with other pupils, teachers, headmaster, family members, city officials, etc. In each case, have the person think about a recent important decision. They are then to reconstruct the basis for their decision, the information which they used and how they valued it, how much confidence they had in the various kinds of information, etc. They could then describe whether the total amount of information was enough or whether they wished they had more. Also, how did they feel when they first made the decision and how do they now feel about it. Do they now wish they had done it differently? This kind of study can easily be designed and carried out by the pupils.

VI. Applications to School

1. Subjects

Arts: Some pupils feel they are not able to make clay sculptures. They are too afraid of failure to even try. However, doing this exercise, with eyes closed, seems to 'take the pressure off', and they are then pleasantly surprised by what they've made and the fun they've had. If this kind of reaction does come up in the discussion, it could be generalized into the kinds of things which do inhibit self-expression; for example, standards of judgement, feelings of inadequacy, and the idea of talent as something only special people have. It is also interesting to look at the choice and appearance of the clay objects made by the pairs and see if it reflects some of the differences in relationships between the pairs. For example, can one see from the final result that the bowl Jo and Bo made expresses their conflicts while you just know that Kim and Karen had fun together making their family of bears. This can initiate a discussion of the general relationships between the way a person feels, thinks and reacts (his/her personality) and the pictures, sculptor, music she/he makes. Is it himself/herself that the artist is trying to communicate? How much does an artistic work communicate? Were the pupils surprised at the amount of communication between them during the exercise? Does our overemphasis on spoken communication blind us to all the other kinds of messages we are continually getting, and giving?

Social Studies: This exercise is usefully applied to the topic of family relationships and, for the older pupils, dating and marriage. The varying range of experiences the different pairs have presents good immediate contact with some of the pleasures of co-operation under difficult conditions as well as the frustrations and aggressions of conflict. The situation of this exercise, where two people are joined by a task that can be done in many ways, is similar to a couple bringing up their child.

Foreign Languages: This is not a good exercise to use for encouraging free conversation in a foreign language. The pupils get too involved in the task and will feel too frustrated if unable to talk freely afterwards. What has been done is to have the pupils write a short description of their experiences in the foreign language after their mother--tongue discussion was finished. These have been used in the cross-nation exchanges.

Biology: Pupils are generally surprised at how well they were able to form the clay without the use of their eyes. This ability is an excellent illustration fo the workings of the touch and pressure senses in our hands. Ask the pupils if they were surprised when they opened their eyes, and if, while they were working, they had a visual image in their mind of the clay object. This image derives from an incredible integration (putting-together) through time of the neural messages both going from the brain to the muscles of their ten fingers for controlling their movements and coming back to the brain from the touch and pressure and position sensory cells in each of these fingers. It's worthwhile thinking about what's going on in the brain during this exercise. Without any effort, conscious thought or concentration the brain produces that image of the object. At the same time, one is planning what to do, and judging how well its coming, and picking up what one's partner is doing, and thinking about the partner, and deciding what to do. Meanwhile, many other ideas and thought probably keep running through one's mind. But none of this stops the moving fingers shaping the clay. One class ended up their discussion of this by making 'pictures' of

their brain doing all these things together. It was enjoyable and the results were quite good and amazingly varied, which says something else about the brain!

C. LEVEL OF ASPIRATION

Pupils often ask themselves, "Do I really want to accomplish a lot - get high marks on school exams, earn a lot of money, help many poor people, have eight children, write a famous novel? This unit uses a short experiment for looking at the origins of individual and cultural differences in what pupils want to achieve or accomplish - their level of aspiration.

I. Equipment

One small plastic cup and ten paper clips for each two pupils. Any set of small bottles, jars, cans, etc., with open tops about 3-4 cm in diameter will do; and metal or rubber washers, tacks or small nails can be used instead of the paper clips. It is best to test out various combinations of the cups and objects to be certain that the task is not too easy or too hard (see Procedure below). Paper, pencils.

II. Procedure

Pupils work in pairs (it is good for the teacher to participate); each pair is given a cup and ten paper clips. The task is to place the cup on the floor, stand directly above it and hold the paper clip by one's face and try to drop the clip into the cup. Before starting, each pupil is to guess how many of the ten paper clips he/she can drop into the cup and then to write this number on her/his own piece of paper. Then, each pupil does the task and writes her/his score next to the guess. The whole thing is then repeated with new guesses and new scores from each pupil. If a paper clip hits the bottom of the cup and bounces out, it is still counted as a 'hit'. (A combination of 'cups and clips' which produces an average of about 50 percent hits is ideal). All the guesses and scores are then written on the blackboard in the following form:

Pupils	1st guess	1st score	2nd guess	2nd score
1. 2. 3.				
Total				
Average				

III. Discussion

Concepts:

a. self-evaluation - winner or loser

b. nature of abilities, talents, skills - what are we born with and what can we learn?

c. need for achievement and fear of failure - which do we think about first and which is more important to us?

d. the forces that shape our level of aspiration - family, friends, culture, religion, nationality

e. what does experience teach us - the persistent fighters and discouraged 'quitters'.

f. group, national and international levels of aspiration.

The class will probably be noisy and the competitive spirit high during the experiment. This is good for it will help the discussion and should itself be a topic for the discussion (why they became so involved in a silly game). An opening question for the discussion, if one is necessary, might be, "what do you think of what you've just done, and the results on the blackboard - what can it show?" This question will give enough direction to the beginning discussion, and the teacher need not structure this further at the moment. The experiment usually works out such that the changes between the first and second guesses are influenced by the first score. This will probably show up in the averages so that if the 1st score average is higher than the 1st guess average, the 2nd guess average will also be higher than the 1st guess. The conclusion: we use past experience to 'set' our expectations of future accomplishments. Then, there is the question of individual differences in the level of aspiration. The set of figures for the 1st guess will reflect this. What reasons can the pupils think of that may explain the wide differences in these first guesses. Could they have said in advance which of their classmates would make high and low guesses? It is also important to compare situations like this one where the self-rating comes from a score, simple and definite, as against other kinds of situations where the evaluation or judging is much more difficult, for example, social 'skills' and physical appearance, and artistic talent. Other possible areas for discussion are as follows:

1. How do you arrive at a realistic estimate of your potential? What does it mean to be realistic?
2. Is there often a difference between your self-evaluation and others' evaluation of you? Why?
3. How do you feel and what do you do in situations where your friends, family, teacher, employer seem to have a different level of aspiration for you than you have for yourself?
4. Do you feel you are continually in competitive situations? Why? Do you like this?
5. Think over the decisions about your own life which you will be making in the future. Do you feel you know enough about your abilities, talents, and skills to feel relaxed about these decisions? If you feel you do not yet know enough, what can you do about it?

III. Follow-up Projects

1. Do a survey study in the school of the jobs or occupations which pupils want when they finish their schooling. The pupils who have made a choice should be asked about the things which influenced them. Information about the occupations of parents and pupils' school marks can be included in the survey.

2. Do a study with the parents of the pupils concerning their grandparents 'dreams' for them and their 'dreams' for their children. Pupils could interview their own parents or switch around and do the parents of a class mate.

3. Do an experiment which shows the social or group pressures on aspiration level. The following task is suggested: Have one small and one large box, or any kind of small and large containers and put about 75 paper clips, nails, etc. in the large one. The task is to move the paper clips one-by-one, as fast as possible into the small box in 20 seconds. Four volunteeers are asked to leave the room; the experiment is explained to the rest of the class and then the volunteers called in one at a time and told that they are going to take a test of 'manual dexterity' (skill in fast accurate movements). The first two volunteers are told that people generally get about 25 clips moved within the 20 seconds while the last two volunteers are told that this number is about 50. Each volunteeer is asked to guess how many he/she will get into the box. After each one does the task, he is asked to make a second guess before doing it a second time. But it is not necessary that it be done a second time, the guess is enough. The discussion of this experiment is about the way we react to group pressures and social norms, how we use these as standards for ourselves by either accepting them or fighting against them (but rarely ignoring them).

4. Do a study with people working at various kinds of jobs to see what information they get and what they use to judge their own success or failure in their job. For example, do most teachers feel the marks their pupils get on exams are the best way they tell how well they are doing as teachers; and do writers 'use' the critics or quantity of books sold; and business men, the total volume of sales; and scientists, the number of their articles published in scientific journals?

5. Is the concept of level of aspiration the same in groups and institutions as it is for individuals? Does the group of people involved with your school have a level of aspiration for the school? Is this the same for pupils, teachers, the headmaster, the inspector, parents, employers? An interview-type of study could be done about this. Other institutions and groups could also be studied: for example, sports teams, labour unions, social welfare agencies, women's organizations, the local government council. What are the kinds of achievemnt criteria or standards for different groups? Does it often happen that there is little agreement within a group about these standards? With what results?

6. What are the effects on peoples' lives of special accomplishments and failures? For example, failure to get into the university, winning a Nobel prize, climbing the tallest mountain, writing a first novel that is a big success, losing an Olympic match, divorce, getting fired from a job?

IV. Applications to School Subjects

Geography: What can be said about relationships between different kinds of physical environments and the aspiration levels of the population? This might focus on the supply of natural resources, food and shelter; do people become lazy if nature has provided them with everything? Do people who have it 'easy' turn to sports competitions, or the arts or warfare because they still 'need' some sense of accomplishment, of achievement? What about those living in very poor or harsh environments?

Social Studies: An interesting focus here could be on changing levels of aspiration - within individuals, families, nations. As examples: (1) the situation today where many young people are rejecting their parents strong interests in high achievement; (2) the situation of blacks in the U.S.A. which is often described as one where a rising level of opportunity quickly leads to a much greater increase in the level of aspiration; and (3) social scientists have developed specific training programmes to be used in developing countries to increase peoples' level of aspiration. Is this good? Will it work? How about training to lower levels of aspiration in countries that 'we' think are too competitive?

Literature: Projects number 2 and 4 can be done together with stories or plays which illustrate these aspects of aspiration level.

Language Studies: Both in one's own mother tongue and in a foreign language, the pupils can compile a long list of the language of aspiration and achievement, success and failure. The list can include both collogquial expressions, which are quite numerous in English, and single words. The list of colloquial expressions in a foreign language could be greatly expanded through an exchange with a school in the appropriate foreign country. It is also interesting to look at, and compare internationally, the values we place on words. For example, what is the 'value-weight' we place on words like ambitious, easygoing, bankruptcy, amateur, prize-winner, second place; skilled, director, and assistant. Pupils may be interested in the class results from each pupil rating such a list of words on a 5-point scale: negative positive

Each pupil would get a sheet with the list of words, each followed by the 5-point scale. The pupil would place a check mark anywhere along the scale to indicate his/her own value, for each of the words or expressions on the list. The same experiment could be done with other groups within the country or with other countries.

Biology: Are humans the only species with aspirations? Do we think that some animals seem happy when they've succeeded in doing something and sad after failures or 'misbehaviour'? Are aspirations part of one's sense of the future? Do animals have this? How about the many folk-tales, myths and legends about animals foreseeing events in the future; for example, the animals that do something differently if it's going to be a cold winter; or, the birds in the southern part of Africa that begin to sing differently months before something terrible happens. Another topic: can we 'define' achievement biologically? Is there a special pattern of physiological processes that go together with the feelings we have when we accomplish something special? Could a physiologist, seeing only a set of recordings of your heart beat, blood pressure, electrical waves from the brain and changes in hormone concentrations from the blood be able to say whether you had gotten a higher or lower than expected score of paper clips in the beginning experiment of this unit?

History: It seems reasonable to explain many historical events as coming from the desire for achievement of individual political leaders, or religious groups or nations. How often does achievement for one group involve exploitation or repression or death to another group? Is this inevitable? Will we only have less conflict and peace after people (and/or their leaders) reduce their high levels of aspiration? Or, could peace and conflict management itself become what we all aspire towards?

Arts: How many pupils are discouraged from enjoying work with the arts because of ideas about high standards of achievement? Pupils can use this unit to examine ideas of standards for creativity, for judging who has it and who hasn't. How many of them are afraid to do anything creative because they combine their own needs for achievement with these ideas of standards and judgement? Is there any evidence that creativity is something only a small portion of the population is born with? The unit Four Hands on the clay can be related to this topic.

Integrated Studies, General Studies: With pupils older than about 16, it may be interesting to bring in some of the philosophical and religious concepts that relate to achievement. Concepts such as fatalism and predestination (what happens to me, what I achieve is God's will) are important for pupils to understand. Hedonism and other forms of non-religious philosophy which stress the here-and-now, the 'live for today' rather than plan for a secure future, can also be brought into the discussion. Another topic comes from the sociological and political studies of Max Weber and Tawney. They both analyze relationships between the spread of the Protestant religion in Europe and the parallel spread oa a capitalist economy. They reasoned that Protestantism (in contrast to Catholicism) encouraged a high aspiration level, individual achievement as a central religious goal. This 'fit in' with the need of a capitalist society for savings and surplus capital accumulation, for income determining social class level, for individual initiative and many other things. Pupils find the idea of this kind of possible connection fascinating.

V. International Exchange

The questions and concepts and pupil reactions to the topic of this unit are one of the most important to exchange with pupils in other countries. Through this, they can begin to have direct contact with the cultural and national influences on people's level of aspiration and see that these are not the same everywhere. If sufficient time is used, they can begin to see how differences in aspiration are part of the total social system, both in their own country and the others with whom they exchange. Thus, to understand or explain national differences in aspiration level requires information about the economy and government, about religion and family size and child-rearing practices, about education and social class differences, about language, mass media and communication patterns, and, the history of the country and how the people look on their past history and their future. Obviously an exchange will not supply all this information, even with additional reading. If the exchange continues, however, with the pupils in each country making an exchanging guesses about each other, then the complexity of explanations becomes apparent and the idea of a social system has more reality. For example, pupils may feel that aspiration level is influenced by religion in another country and then find out that the influence of religion itself has changed as a result of changing employment of women and smaller family size. The concept of a social system, with its individual institutions having meaning only through relationships with

each other, is an extremely difficult and sophisticated concept for most pupils. Thus, the effort seems worth making. The exchange of experiences with this unit provedes a good example of the way looking at another country helps us to better understand our own.

D. RUMOUR EXPERIMENT

How does language reflect reality? In this unit the way visual and spoken information are passed along from person to person is studied. The process is complicated; many things influence it. Understanding this complexity is an important part of our effective use of communication.

I. Procedure

6 volunteers are needed. The class and the volunteers are then told that the first volunteer will look at a picture for 1½ minutes while the others are out of the room. Then, the picture is to be put away and the second volunteer brought into the room. The first one describes the picture to the second one saying everything he/she can remember about it. No questions are to be asked and it is important that the class be quiet. After the first volunteer is finished with the description, the third one comes in and listens to the description from the second person. This process continues up to the sixth person, who, after he/she has heard the description, draws a picture based on it.

II. The picture

The project teachers have all been using the same picture ... but any picture with a fair amount of detail will work well.

If a tape recorder is available, use it to play back the early descriptions. Otherwise, it works almost as well to have several pupils keeping a check-list of the individual items mentioned at each succeeding retelling, noting down whether they are accurately described and whether information is lost (-), added to (+) or changed (x). Give the recording pupils time to work out their recording form and be sure they are in agreement on the difference between the + and x.

For the international exchange of the final reports, get the last person to draw the picture. It will photocopy better if it is drawn with a felt pen.

III. Discussion

Concepts:

a. Information processing - classification and selection aspects

b. memory - association processes

c. stereotypes - as a universal phenomena

d. emotions - as they distort communication

e. vision and language - relationships in communication

f. uncertainty in communication - our reactions for decisions

The pupils will probably want to begin the discussion by sharing their views of what happened. The volunteers in the experiment may feel defensive about their poor performance and want a chance to describe their reactions.

When the pupils have completed their descriptions of what happened, they are ready to begin analyzing with questions of the type: "Why did it happen the way it did?"

Some pupils will probably make the correct point that the results were much dependent upon the first person's description. You may want to support this by showing the pupils one or more of the reports and final pictures form other countries. With the pupils being aware, then, of the great variety of results from classes in other countries, they have a bais for examining the nature of communication, or information processing, as it relates to a visual image and spoken language. The main theme for this is the individuality of selection and classification processes in communication; that our individuality as people both comes from and is expressed in the individuality of our communication processes.

Selection and Classification:

What determined the amount of description for the different things in the picture; for example, was there only one word for the bicycle and tree, several for the store keeper and many for the store and advertisement? Does the length of the description indicate the complextity of the classification system we use for thinking and communicating about people, events and things? Does the concept of a stereotype mean a simplified (one or two word) classification applied to individuals or groups or things?

Memory:

How does the process of association (relating things to each other) work in our memory? When one of the participants in the experiment heard words like bicycle, store and Indian was there an automatic association with some memory from past experience? Did this help one to remember the new description? If so, what happened if the further description of the store or Indian didn't fit in with one's past experiences? Does this explain why many of the final drawings look like scenes from the participant's home town? When we listen to someone tell a story, how much does our mind add these associations of our own rather than concentrating on everything that is being said?

Emotions and Personality:

Does what we see in a picture (or a real scene) reflect our individuality or personality? Some participants emphasize a physical description of the picture, others try to capture the general feeling or atmosphere while others will imagine the relationships between the people. In the experiment, did such aspects of personal interpretation become more obvious with the last person, who had to draw something? Also, with the last 2-3 participants, as the description gets more distorted or illogical, what were some of the reactions to this uncertainty? Was something more likely to be left out if it made no sense? Was one participant willing to describe nonsense while another left out the things that were not logical? Is this a reflection of differences between people?

Did the participants emotional reactions - their positive and negative feelings - to the parts of the picture, and to the experiment

itself, influence how things were described and what was remembered? Psychologists have asked people to make up stories about sets of pictures or to describe what they 'see' in inkblots. They use this as a way to understand some of the differences between people. When a picture or situation is complicated and unclear, what we make of it partly depends upon what we are, our personality.

Another difference between the participants may be that some depended mostly on remembering the exact words of the description while others formed a visual image of the picture as it was described to them. It is interesting to explore this difference with the participants and class.

Daily-life Situations:

What is the meaning of the concepts from this experiment in daily life? For example, we should realize how normal it is for our memory to change things, that we can never be certain of its accuracy. How often are conflicts caused by two people or groups or nations seeing the same situation differently even though they may use the same words to describe it? More of these aspects are discussed in Section VI.

IV. Variations

1. Divide the class into groups of six. Repeat the experiment with each group beginning with the same picture. Compare the final drawings for the discussion.

2. Divide the class into groups of six or eight. You may want to use the same picture for all groups or 2-3 different pictures. The 'first' person describes the picture to the 2nd person who then draws it. The 3rd person looks at the drawing for 1 minute and then describes it to the 4th person who then draws it. The 5th looks at this drawing for 1 minute, etc. This variation produces more experience and data for comparing visual and spoken communication and involves everyone.

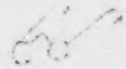
V. Follow-up Projects

1. The influence of emotions and stereotypes on perception and communication can be studied by selecting or making a beginning picture especially for this purpose; for example, a scene involving racial groups or one between powerful and powerless individuals or between young and old.

2. Study the way a rumour (or rumours of different types) spread through the school and/or community. Care must be taken in the selection of the rumour. A careful plan should be devised for studying the process of beginning and spreading, and the changes in the rumour as it is repeated. There is an interesting article about a famous French incident of the spreading of a rumour through a whole town and books have been published on the psychology of rumours.

3. Do a simple experiment on the role of association and classification in memory. Prepare 2 sets of cards, each set having one of these designs:

A



B

Half the pupils look at one design, half the other, with no instructions given as to the purpose of the experiment. Pass the designs out face down, allow 10 seconds to look at it; each pupil should only see her/his own design. Then, collect the designs. One week later ask everyone to draw their design to the best of their memory. Variations on the same theme: (1) compare memorization of a list of 3-letter words (dog, car, tin) with 3-letter nonsense syllables (gub, hek, dog) and 3-letter consonant 'words' (ntc, gnb, hlk). This can be tested in 10-15 minutes. (2) using recordings of familiar music, see how many pupils can recognize the piece with only the first 1 second, 2 seconds, etc., played (or use a piano).

4. The other perception experiments in this curriculum can be used as a follow-up to this one. These would include Rotating Trapezoid, Multistability in Perception, the Neckar Cube and Faces. In all of these, perception as an active construction process (selection, classification and valueing) is stressed.

5. Substitute a real-life scene for one on paper. For example, have a pupil go out to the school playground or the headmaster's office and observe for 1-2 minutes, come back to class and then repeat the experimental procedure as described in Section I. The other participants should not be told where the first pupil has gone; and the first participant should be told to describe the place without saying what or where it is.

VI. Applications to school subjects

Social Studies: Perception and communication are key processes in all social relationships and social institutions. Thus, the importance of pupils' understanding of the errors, distortions, limitations, unconscious selectivity and valueing which characterize perception and communication processes, both their own and others. For example, a real-life counterpart to the rumour experiment is the rumour itself. Rumours are often dramatic examples of what is a common problem: words and situations mean different things to different people but we continually communicate as if this were not so or of little importance. Another idea of relevance to social studies concerns our reactions to uncertainty in information or communication. One example is our system of legal procedures for catching, having a trial, and punishing criminals. They illustrate the way a nation tries to come as close as possible to the truth in a situation where the whole truth may never be known, where decisions are taken despite the uncertainty of information. Many legal procedures can be seen as ways of responding to this uncertainty (a jury rather than a single judge). The same kind of analysis can be applied to discipline situations within the school and to our whole system of examinations and school grades. Both doctors and politicians are constantly making important decisions with less than complete information. How have different societies structured both these professions (and others) to take account of this uncertainty?

Foreign Languages: This experiment has been widely used in foreign language classes as a way of getting pupils talking in the foreign language. The pupils typically explain their errors or mistakes on their language difficulty. They want to repeat the experiment in their own language, using a new picture. They may be surprised to find that they do just as poorly or even worse! The explanation may be that they concentrate more when working in the foreign language.

Language Studies: The experiment provides a starting experience for exploring the relationships between language and 'reality'. Do a detailed analysis of the changes in descriptions for different kinds of objects within the picture or in a real-life situation. Why do we use different sets of descriptive terms for describing people, cars, trees, horses, furniture, etc.? The personal styles of different poets and novelists can be compared with this in mind. Also, how is language used to influence our emotional reactions, the values we place on things described? Pupils could study this by writing two descriptions of an object or one of their class-mates (or the teacher): one to arouse a positive, favourable response; the other an unfavourable response.

History: How do stereotypes affect relationships between countries and within a country? Are world political leaders more or less likely to have stereotypes like everyone else? How do these stereotypes influence communication? An approach to these kinds of questions is to study a historical event as it was seen from the viewpoints of different countries. For example, original sources (newspapers, speeches, government records) have been compared from France and Germany about the causes of World War I. There are many different kinds of historical and present-day situations where this method may be used.

Biology: The experiment can introduce the concept that perception (visual and auditory) is a process of active selection, classification and valueing (negative or positive emotional response). Our eyes and ears, and the parts of the brain to which they connect, do not work like a movie camera and tape recorder. Rather, the process is one of seeking information, of focussing attention upon significant parts of the total picture, and then responding to the meaning one puts on this picture, based upon one's own past experiences. This meaning comes from the classification applied to the picture. For example, one person 'sees' "a bicycle," another "a boy's bicycle," or "a boy's bicycle that is old" or "boy's bicycle, old, with no gears," etc. Each individual also places some value — negative, neutral positive — upon the classification.

This type of information processing is the same for animals. However, each species has its own 'perceptual world'. This refers to the fact that, in each species vision, touch, taste, hearing and temperature senses are combined and used differently. For example, in finding food some animals use their eyes while others use their noses. If you put an animal that uses smell under a glass jar and place food outside the jar, it will not respond.

This idea of 'perceptual worlds', and how they've developed through evolution so that the way-of-life of each species is adapted to its environment, is quite important for animal biology. But it is equally important to understand its application to humans. Other units in this curriculum develop this further as it is a central idea for the curriculum approach. (See Rotating Trapezoid, Neckar Cube, Multistability in Perception). A full, working appreciation of this concept helps pupils in their reactions and communications with others. The concept is easily applied to differences between nationalities or between farm and city or rich and poor people. But it applies equally to differences in perceptual reactions to the school, between pupils, teachers and parents, between 1st and 7th grade pupils or between male and female pupils. This is, thus, a situation where the animal biology can illustrate a common human situation.

E. BALLOON IN FLIGHT

The class begins with the following story:

You set off alone in a balloon and have taken 10 things along with you. After a while the balloon begins to lose height so you must throw out one article. Which do you choose? Unfortunately, the balloon still keeps going down so you have to choose another thing to throw overboard and this continues until you only have one left. Which is it?

List of articles:

Binoculars	Camping stove	Extra clothes
Books	First-aid kit	Tool kit
Camera	Pet animal	Washing kit
	Radio	

The pupils' work individually, listing the order in which they would throw out the things.

After this is finished, there are many ways for the class to compare and discuss the individual pupils' responses to this situation. Some teachers put the list on the blackboard and, for each item, ask how many threw it out first and how many kept it until the end. With this information before them, the pupils will probably begin to discuss the 'logic' of their choices. Alternatively, or in addition to this, the teacher can pick out several of the items for discussion. For example, one can ask about the 'pet animal'; "How many of you threw it out 1st, 2nd, 3rd etc.?"; then, put this information on the blackboard and let the discussion take off from there. Pupils generally have a tendency to limit their discussion to technical matters, e.g. "The radio is useful in emergencies; the binoculars can help in finding a landing place, etc." However, there are a whole range of more personal and individualistic attitudes which are reflected in the pupils' choices and, when brought into the discussion, can give a deeper meaning to the experiment. The items which are perhaps best for this are the pet animal, books, spare clothes and washing kit.

For example, one class discussion about the pet animal began with the observation that several of the pupils who threw it out first had one at home; some others, who kept it for last, wanted one but their parents had forbidden it. This was the beginning of a long and good discussion. Similarly, the item 'books' often brings out some pupils' negative attitudes about school and other pupils' [illegible] ' use of books as an escape into a world of fantasy and adventure.

There is a valuable point that can emerge through this kind of discussion: the things we choose for ourself are an expression of many aspects of our own individuality and a statement to others about ourselves. The Self-Concept unit (p. 60) develops much the same idea in terms of the things we do rather than what we buy or collect or keep. The pupils can also compare the rational and irrational or emotional aspects of decision making. These are also present in group decision processes.

Variation: the calss is divided into small groups, the same task is given, and the group must decide the order for throwing out the things.

F. DEVELOPMENT EDUCATION

Education about the Third World typically focusses on problems of national development and the money contributed by industrialized nations to help them. This often results in pupils visualizing whole

continents as just problems with little feeling for the variety of attitudes, cultures and life-styles within each country.

Two suggestions are offered to help widen pupil's views: (1) set up an exchange with a class in the Third World, using units of the curriculum selected together; and also (2) carry on a project in one's local community: a study, in depth, of a local development problem and/or an action project, working for community development, or for changing local policies in ways beneficial to the Third World, e.g. having super-markets import more food products from the Third World.

The following two simulation exercises are useful classroom supplements to a unit on the Third World. It is worthwhile following up these simulations with a discussion of the emotional reactions to being in one's chosen role of the charitable 'giver' and one's forced role of the needy 'taker'. A useful starting point for such a discussion would be to do some role-playing of situations which are somewhat comparable but more within the pupils experiences. The unit Cat and Mouse Fantasy (p. 66) can also be used.

Oxfam's Education Department has produced two simulation exercises to be used for teaching young people — and adults — about developing countries through participation in decision-making situations concerned with Third World development.

The Aid Committee Simulation Exercise

This is relatively simple. It was designed for use ..... in lower secondary school classes, but has been succesfully played with older groups.

The players study one developing country and its development needs, using 'background papers', and then decide which projects deserve financing with a limited supply of money. Time needed: about 4 school lesson periods.

Oxfam can supply instructions, slides and background papers on several Third World countries. (Oxfam, 274 Banbury Road, Oxford, United Kingdom) The Development Simulation Exercise:

This game was devised for older pupils (16-18), youth groups and adults. Preferably the players should have had some experience of role--playing beforehand and already know a little about overseas aid and development.

Up to 60 people can take part in the game. They divide into groups to study the background papers and then play the roles of governments of several developing countries. Each group represents one country, and draws up a 3-5 year development plan and one major project needing support in its own country. In plenary session, each group presents its project and requests aid from a critical committee (economic consortium) with attitudes typical of rich world governments. Time needed to play the game: about one day.

Oxfam can supply instructions and background papers on many Third World countries. Cost: free, but donations are welcome to cover costs.

There are many other simulation exercises and a wide variety of projects related to education about the Third World. An excellent, up-to-date source-book is published by the Education Unit, VCOAD, 25 Wilton Road, London, S.W.1. It is called The Development Puzzle. (Cost: 60p)

G. GUILTY OR INNOCENT

This experiment uses a 'word-association test' to study the nature of emotional influences on language and thought, and the concepts of guilt and innocence. In a word association test, a stimulus word is read from a word list to the subject, who then responds with the first word that comes into his/her mind. (For example: teacher says "tree", pupil responds with "bird")

Procedure

Two pupils, whom the teacher considers imaginative, are selected from the class to be subjects. Or, two volunteers can be used. The subjects are taken out of the room and each given an unmarked envelope with a description of an evening's activities. The subject is told to imagine himself in the activities, picturing himself in each situation in full colour, going through the motions. One set of instructions is called 'guilty' and the other 'innocent'. (Note: for younger pupils, stories closer to their own experiences should be substituted).

The 'guilty' instructions are as follows:

"Last night about two o'clock you stole a blue car from a parking space near a hotel. In it was a football and a white leather handbag containing a gold ring, a pen, and £ 150 in cash. You drove the car fast, about 25 kilometers when you swerved from the road, hitting a large tree. Your left hand was cut, getting blood on the white handbag Fearful of a blood analysis, which might connect you to the car theft, you took the handbag with you. You wiped the door handles and the steering wheel carefully to remove finger prints. The keys you hid about a block from the scene of the accident. About two kilometers from the accident, you hid the white bag under a stone near the bridge after taking out the £ 150.

The 'innocent' instruction are as folows:

"You came home from work last night about 5 o'clock, ate dinner with your family, played cards until about 10 o'clock, took the dog out for a walk and then went to bed. About midnight the telephone rang. You answered - wrong number. You noticed that it was raining from the east side of the house. You went back to bed. This morning you got up at 6.30, half-an-hour earlier than usual."

The subjects should not talk with each other or see each other's instructions and the teacher should not know who has the 'guilty' set. They should be allowed about five minutes to study them. During this five minutes the teacher should explain to the class the nature of the experiment. He/she should read both instructions without saying which person has which set. The nature of a word-association test should be explained to them and their job on 'the jury' to determine which pupil is guilty. One person in the class can, (if a stop watch is available) others recorder the response words, and others can note down any unusual behaviour such as coughing, stalling for time, mannerisms, etc. The subjects are brought in one at a time, and given the word--association test. The class should be asked to be totally quiet during the testing. After the test has been given to both, the class is to analyse the responses to determine which subject is guilty. Each member can express his opinion and a vote can be taken. The subjects are told to be quiet and make no reaction to the discussion. After a decision is reached (it will almost inevitably be the right one) a discussion should begin on the relation of this experimental situation to actual situations. A decision might be reached by the class as to whether they think a word-association test should be used as evidence in a court. The discussion might then be expaned to cover the influence of feelings

of guilt. For example, how do other people 'make' us feel guilty? Is this good or bad? How do we act when we feel guilty? Can some people hide their emotions better than others?

Word-Association List (To be read slowly, in a neutral voice, allowing time for the recorders to write the response words)

1. book	10. MONEY	19. STEAL	28. RING
2. cow	11. clock	20. BLOOD	29. cake
3. BLUE	12. horse	21. watch	30 STONE
4. railroad	13. TREE	22. tray	31. safe
5. house	14. HANDBAG	23. FOOTBALL	32. gun
6. black	15. chair	24. silk	33. PEN
7. HOTEL	16. KEYS	25. BRIDGE	34. WHITE
8. piano	17. paper	26. shoes	35. FINGERPRINT
9. CAR	18. picture	27. cigarettes	

(Words connected with the 'crime' are in capitals.)

H. EXPORT-IMPORT

Do we realise how much of everyday life is tied up with other countries, and with international trade; and, hence, how much peace is an outcome of economic interdependency?

Method. The children can in their own or school time go around to different shops and find out what kinds of products come from particular countries. It might help if a type af questionnaire is constructed so as too make the task of the pupils more efficient. The questionnaire could include questions to the shop keeper on why he has chosen particular products from a certain country. How did he find out about them; where does he order from. They can also ask sales personnel (after asking permission of the shop keeper) or the customers directly. What is there response to imported goods and why do they choose them?

The next part of the work is in the classroom. The pupils can find out who the importers of various products are, i.e. by using the telephone directory or trade magazines. Letters could be sent to them or a telephone interview done asking various questions related to the work carried out in the shop. Extra questions could be related to the particular difficulties they experience with legal matters and protective trade barriers that exist. The pupils can also move on to other matters relating to the quality of products and the sort of guarentees they have. There should be many sources of material for this project: the countries'commercial attachés, normal school geography books, and export and import trade magazines. It is also interesting to find out the trade balance between raw materials, agricultural produce and manufactured goods.

Maps diagrams charts etc. could all be constructed from data received from the pupils.

More advanced groups could delve deeper into the work. Studying international economics, they could investigate several business firms that have international branch offices. Through personal or telephone interviews or mailed questionnaires, information could be compiled on the business man's perception of 'national character', based on their own particular kinds of experience doing business with another country. What are the problems of staffing a branch office or plant in another country? Are national loyalties present and what sort of prejudices are met? Do brand names have to be altered to suit local conditions?

There are many directions that the project could take, and individual teachers must interpret this in the best way suited to local conditions. Follow up work and documentation can vary much, but the students should at the end see how much of daily life depends on international trade. The project can become a two-way study by arranging to do it together with a class in another country. It would then focus on the trade between the two countries.

I. FACES

Procedure. The pupils are shown a set of drawings or pictures of nine faces, both male and female. They also have a list of seven different occupations: for example, diplomat, criminal, student, comedian, policeman, teacher, musician. Working individually, or in small groups, they are to decide which face goes with each of the occupations. For the extra two faces they suggest occupations.

Discussion. What are some of the processes by which we begin to form stereotypes: (a) about the way people look; and (b) the kinds of people who have different jobs?

What are some of the results of our reacting on the basis of such stereotypes? Are they 'true' in some sense or useful, or necessary, or unavoidable?

Do you yourself try to look like a stereotype?

What do you think it is like for the diplomat who looks like a boxer or gangster (or vice versa) and the young actress who is ugly, etc.? You may want to role-play some situations you make up based on this. Another situation for role-playing: Doctor (plastic surgeon), patient (face smashed in accident), and parents of patient (optional). There is a discussion over what kind of face the surgeon should 'rebuild'. The discussion of faces may be anxiety-producing, especially for some adolescents. Pupils should not be pushed into this role-playing. And, if a discussion seems to be raising the anxiety level, it may be worthwhile terminating it and discussing the anxiety itself instead.

J. FINGER-MAZE EXPERIMENT

Pupils are given small wooden matchsticks, a sheet of paper and quick-drying glue. By glueing the matchsticks to the paper, they construct a maze-type pathway with a starting and ending place and dead-ends. They then pair up with someone who hasn't seen their maze and test each other's learning ability. One pupil closes his eyes, has his finger placed on the starting point and then feels his way along until he finally comes to the correct end point. This is repeated several or many times, recording the improvement trial-by-trial, until the correct path is followed without mistakes along the way. The time it takes and the number of errors (wrong turns) made along the way can be written down. The experiment can serve as an introduction to non-verbal learning. The students quickly find out the kinds of problems that arise as a consequence of the different kinds of patterns used in the mazes and the different ways one can keep score and measure the amount of learning.

The discussion can focus on trying to describe what is actually learned in this task and whether it is the same for everyone. For example, is the sequence of left and right turns memorised, or does one begin to form an image of the maze? These differences help pupils understand the individuality of their basic learning processes, that people learn the same thing in different ways.

What is it like to look at a maze first, then close one's eyes and find the right path? Is a 1-second look enough?

What will happen if you try the same maze 1 hour, 1 day, or 1 week later? Do the pupils who learned their maze faster remember it better? Are they cleverer, better in all things?

K. HUMOUR

Everyday we laugh at so many things but do we ever stop to think why we do? Do people in other countries find the same things funny? Is humour related to national character and are there wide cultural or social class and age differences in the sense of humour within a country?

Materials: Scrap books, paste, paper and scissors. Where possible films and recordings can also be used.

Procedure: Begin with the story of the Princess who would not laugh until she was presented with a totally unexpected situation, or other similar stories illustrating humour (or film or recording). The pupils can then relate funny situations that made them laugh. Have the class (or small groups) make a list of the kinds or types of situations at which we laugh. What conclusions can be drawn from this list? The pupils could then take a look at the question of 'life-stages' in humour. Are there different things that children, adolescents, and young, middle-aged or old adults laugh at? One source of information on this would be the jokes and cartoons in magazines that have audiences of different ages. Individual differences in reactions to humour can be studied amongst pupils and parents with a joke and cartoon collection assembled by the class. A rating form can be printed up with rating scales (from "didn't smile" to "laughed out loud"). Pupils have also enjoyed writing their own captions to cartoons. The cartoons can be mounted on numbered cards and the real caption written on the back. These are passed around the class with pupils taking a few minutes each, seeing if they can think up a caption. All of these procedures will benefit from being done in co-operation with a class in another country and/or different cultural or language groups within one's country.

Discussion: Why do people laugh? Do they do so out of hostility, or because they are surprised, or simply to relieve tension? Must one learn to laugh? How and when during childhood does laughter appear; why not earlier like crying? What is the purpose of humour? Does it help human interactions or disrupt them? What is similar and different between laughing and crying? Could human beings have developed so that we laughed when we were sad and cried in funny situations? What is the difference between people who always remember jokes and those who always forget them? Can you try to find out some differences? What roles does humour play in our life?

L. IDEAL GROUP
(original idea from Daniel I. Malamud)

In a large room cleared of furniture, the class divides into groups of 5-6. Each group forms a linked-arms circle, everyone closes their eyes and for the rest of the time they are not to speak or open their eyes. The teacher provides a narration for a series of 5 phases which involve the pupils in imagining, fantasising and feeling different aspects of being part of an ideal group: I) During the first linked-arms-in-circle phase, the narrator describes some of the positive supportive aspects of group membership. II) The group members then touch each other to find identifying features (eye glasses, wristwatch, sweater) which will assure their being able to recognize each other later with eyes still closed. III) The third phase, with each group reformed in their circles, consists of a long drawn out separation, a slow pulling apart, where the narrator talks about conflicts between the desire to keep the group together and the need, now, to separate. IV) After slowly pulling apart, each one goes off by himself while the narrator talks about independence

and loneliness. After several minutes of silence, the last phase, V) consists of each one trying to find the other members of his group as they come together for a big 'reunion party'.

The discussion which follows focusses on the various meanings of groups, the individual experiences in the exercise and its relationships with other group experiences. Is man biologically a social animal? Can you imagine yourself living totally alone? Or with one other person? The pupils may themselves know stories of children supposedly brought up by animals in the forests.

What is the feeling of loneliness? Isn't it hard to describe? Why? Is complete trust necessary for an ideal group? Does the group start out with this or does it develop later? How? Did you feel much trust with your ideal group? How many people for an ideal group?

When you are grown up and if you have a family of your own, do you think it may be an ideal group? How? The ideal family can be compared to thecharacteristics of today's family life. One interesting way to do this is to discuss how the family is perceived by: (1) hearing - noise, quarrelling, discussing, television, violin practicing; (2) seeing - the home as it looks, clothing, neatness, space; (3) touching - caressing, beating, working together; (4) tasting - food and drink, meals and snacks; and (5) smelling - odours in and around the house, open windows.

Narrator's Scenario for the five phases

Given below is a framework of ideas. The narrator is to use his/her own creativity and feelings and experience in improvising a narration. As the narration is only meant to provide some structure to the participants' own fantasy processes, it is important that there be long pauses between statements ... time for the fantasy. However, the slowness and pauses should not produce a sleepy monotone type of speaking. The narrator should put some feeling and emotion and animation into the scenario. It is best to do this without anyone watching: ask those pupils not participating to leave the room.

Phase I: Each group in a circle with arms over shoulders interlocked. "Try to forget that you know the people in your group and that they know you...this is a whole new experience, outside of the here and now, so put all of that out of your mind and start afresh. Keep your eyes closed and make no sounds."

"You are with your ideal group...friends you love to be with... whom you know all love to have you as part of the group. You cannot imagine a better group of friends. You can always be yourself...everyone is open. You always have good times together...fun, laughter, good talk, sharing, helping, working together."

Phase II: Touching each other to find identifying characteristics. "You cannot always be with your group. But before you separate you want to be sure you can easily find each other again. So, keeping your eyes closed and making no sounds, break the circle up and go around to all the other members of your group. With each one you should find some identifying thing, like spectacles, clothes, shoes, etc., which will be enough for you to find the person later. When you are finished the group should lock arms again."

Phase III: Pulling apart, separation.

(The narrator should try to prolong this phase as long as possible). "Now you are together again, but you know that has to end soon. But you do not want it to end. You know it is time to separate but you want to hold the others back...to not let them go just yet...one more minute or

so...but you have to go...no, not just yet. We really must! When you are free, walk slowly backward until you reach the wall of the room. Then, just stand or sit there."

Phase IV: Loneliness and independence.

"Now you are by yourself...all alone. You miss your group...but it is good to feel independent. No one is watching you or expecting things from you. You are free to do what you want. But there is no-one to share it with. Loneliness." (Stop the narration for about 3-5 minutes. Quietly change your own position in the room so it is not quite as easy for the groups to find each other).

Phase V: Reunion, Celebration!

"Now's the time when you've arranged to be together again...it is time for a celebration with your group. So, keep your eyes closed, search for your friends, when you find someone from your group, stay together and look for the others. And, when you are all together, have your celebration!"

M. LEARNING TO THINK

Aim: to become aware of aspects of intellectual development in younger children.

Equipment: Jars; 2 wide + short; 1 narrow + tall.
2 balls of clay. 1 jar of water. Sugar.
1 bunch of flowers.

Procedure: One may begin this topic by asking the pupils what they think they would have answered at age 3, 6, or 9 given such tests as those below.

The pupils then will plan a way of putting their theories to the test, using younger children in the school or younger relatives or neighbors.

1. Wide and Narrow water jar. The child is shown 2 identical wide water jars with equal amounts of water. The child is asked, "Are the amounts of water the same?" The contents of one of the jars is then poured into a tall, narrow jar, and the same question is asked.

2. Clay Ball. The child is shown two identical clay balls, and asked, "Are they the same size?" After he/she responds, one of the balls is flattened, and the same question is asked.

3. Sugar + Water. Some sugar is placed into a glass of water and stirred until dissolved. The child is asked, "What happened to the sugar?"

4. Flowers + Daisies. The child is shown a bunch of flowers, most of which are daisies, and he is asked, "Are there more daisies than flowers, or more flowers than daisies?"

5. Dots. The child is shown a series of dots (or balls) as follows:

o o o o o o o o o

o o o o o o o o o

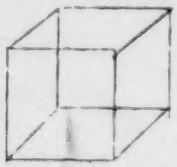
and asked, "Which line has more dots (or balls)?"

These experiments introduce the question of the ways in which we learn about our physical world. Since no one tells or shows us that the clay ball doesn't get lighter or smaller when it's flattened out, how do we come to know this? We use a combination of both scientific truth

and 'folk-wisdom' to explain the things that happen in nature. It is interesting for the pupils to look at the origins of both kinds of knowing, and to find out that they are the same. The variations from country to country in folk-wisdom and its incorporation into fables and myths can also be brought into the discussion.

N. NECKER CUBE

The pupils each draw an outline of a cube on a sheet of paper -- two perfect squares and the connecting lines. They then stare at it for a while, keeping their eyes fixed on the centre. With almost all of them the cube will seem to magically change its orientation 2-5 times per minute as one square or the other becomes the 'front' of the cube. Once they discover the phenomenon they are encouraged to investigate it scientifically, e.g. using only one eye, blinking their eyes, concentrating on preventing it from changing, drawing other kinds of three dimensional outline figures, etc. With all these variations they can measure differences in the rate of change in the figure.



The discussion can begin with the basic question: "Why do we see the line drawing as a 3-dimensional object?" They can look at what their own experiments may have told them about the phenomenon and about visual processes. The chief focus here could be on listing the things they still do not know. An important primary goal is to provide some understanding of the concept of our vision, not as a movie-camera recording reality, but as an active information seeking and processing system, constructing and reconstructing 'reality'. We make the 12 lines into a box and we can, and do, do this in the two ways. In what other ways do we individually see things as we know them, or as we want them to be, or as we think they are?

O. PEACEFUL NEGOTIATIONS
(Original idea from Barbara E. Long's 'Road Game'[1])

Materials Needed

4 of the largest available sheets of coloured paper or cardboard, in different colours. Or, pages from a newspaper can be taped together and painted in 4 colours. 4 broad (2 cm) paintbrushes taped to the ends of long sticks (about 1 m.). 4 tins, jars, pans or small buckets with a small amount of water paint (washable) in the same colours as the paper sheets.

Setting it up

The 4 sheets of coloured paper are taped together to make a large square or rectangle, approximately $1\frac{1}{2}$ x $2\frac{1}{2}$ m. This is placed on the floor, with newspapers around the edges to protect the floor from paint, and in the centre of a large area cleared of furniture. Each coloured square represents a country and each one has its own paintbrush and supply ot paint of its own colour for 'building' roads into the other countries.

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1. Copyright: Herder & Herder, New York, 1970.

The class divides into 4 groups, each to a country, and the members of each pick their own Foreign Minister and Road Builder (who gets the paintbrush).

The Rules

The object of the game is for a country to build as many roads as possible from its own country to the outside border of any other country. There are 2 conditions for building each road: (1) permission to build must first be obtained from each and any country that the road goes through; (2) if it is necessary to cross another country's road, permission must also be obtained for that. All the negotiations about these permissions are done by the Foreign Ministers. The other countrymen are only supposed to advise their Minister and help him/her decide what to negotiate for and with whom, and what strategies to use. 3 things are not allowed: (1) building a road all along the outside edge of the other 3 countries; (2) building a road straight across the middle point where the four countries join; and (3) dividing a road into two roads. (see 1, 2, and 3 on the drawing)

Procedure

After the class has formed into groups and each one has chosen their Foreign Minister and Road Builder, explain the rules to them and let them begin. From that point on it is best to refuse to answer questions or intervene in any disputes. The game can be stopped after about 15-20 minutes, by which time the intensity of the activity will probably have increased sufficiently to require that it be stopped. Let the discussion start spontaneously with no 'interference'; but before the class has returned to their seats, ask, "Who won?" and give them time to figure it out (or fight about it!).

Discussion

The form of the discussion results from the way the game was played, i.e. how much they 'forgot' the rules, how involved they got, how much they are still fighting about 'who did what without permission', etc. One can start with a question such as, "What happened that you became so involved in such a silly game?" The central theme of the discussion should be the nature of competition and co-operation: the emotional responses (how long it takes to cool down, how little time it takes to get heated up), the situations which may lead to co-operation instead of competition.

Sooner or later, the discussion should focus on the activities of the negotiators, the Foreign Ministers. What was their relationship with the people they represented, the pupils of 'their country'? How did they feel serving as a representative? Did this influence their contact and negotiations with the other Foreign Ministers? What happened to this whole process if and when one country looked like being the winner; or if and when one country began to change the rules or 'forget' them? Does all this relate to real international affairs?

Alternative Procedure

Especially with older pupils, interesting results have been obtained with the addition of the following descriptions, typed on separate slips of paper, one of which is handed to each Foreign Minister just before the game begins:

1. You represent a large powerful country which feels that in these times of 'power politics' it's best to constantly show your power to other countries.
2. You represent a large powerful country that likes to use its power as a protection for other smaller countries that you want as friends.
3. You represent a small country that wants to be independent but finds it impossible in a world of international differences. You have to 'join' a large powerful country.
4. You represent a small country. The best way for you to keep some independence is to play the big powerful countries off against each other, letting them compete for your friendship.

The Foreign Ministers can show this to the pupils in their country but not to anyone from the other countries. If these are used, the possibilities for the discussion widen greatly and it is best to use more than one class period.

P. ROLE PLAYING

Setting up a Role-Plsy Session: Techniques

I. Warm-up: Exercises to prepare class for activities in role-playing

A. These activities should involve as many pupils as possible.

B. The pupils should have a number of choices to pick from. For example: emotional and non-emotional responses to questins - "It is 5.30 a.m. Your alarm clock has just gone off. Show us what you do." "Walk down the street and look at yourself in the windows as you go by." The organiser could keep such titles on cards for them to look through.

C. Warm-up activities may be verbal or non-verbal.

II. Preparation: Directions

A. Give as many as possible. Make them clear.

B. Establish a setting. - "This area is the doorway. You enter here and leave there."

C. Sometimes it is a good idea to get the pupils to run through a short fantasy to visualise the setting.

D. Ask the class to help with the physical aspects of the setting by moving chairs and creating a stage.

III. Techniques:

A. The Interview - Ask pupils who are assigned roles certain questions about themselves .... "How do you feel now?", "What are you going to do about your situation?", "How old are you?", "Do you like him?", "What kind of a person are you?".

B. Side-coaching - Side-coaching helps the pupils in the audience and the pupils in the role-play focus their attention on the action or the solution to the problem. This is and important role for the teacher or pupil. The coach should move around the players with helpful comments (never critical) meant to keep some reality to the conversations.

C. The Freeze - Stop the action and get suggestions from the audience. "What do you think he should do now?". Interview the 'actors'... "How do you feel now?", "Are you making progress?". Be ready to change the course of action if necessary.

D. Doubling - The teacher may act as the double or he may use a pupil as double. The double copies the posture and facial expressions of the player. This gives the player feed-back about his interpretation of the role. Doubling gives more pupils a chance to get in touch with each role. The double

should stand or sit as close to the player as possible. The teacher can prepare the pupil double by telling him to feel what the player feels. "He is tense, nervous, happy," etc.

E. Alter-ego - Alter-ego is an extension of the double. The alter-ego stands or sits behind the player. He does not have to copy posture or facial expressions. The alter-ego speaks the innermost thoughts of the character. The pupil playing a character may decide to be polite. He is really being put down by another character. In his mind, he is calling this character names or thinking things that are not so polite. The alter-ego picks up these thoughts and speaks them for the player. When he speaks these thoughts, he speaks as the player. The alter-ego and the player become one. The alter-ego makes the unexpressed feelings of the player explicit. This gives depth to the role play and dimension to the role.

F. Soliloquy - a player turns aside to talk about his/her inner-most thoughts.

G. Role-reversal - the action can be stopped and replayed with two players exchanging roles.

IV. Closure:

Have the pupils focus on a solution or the ending. Sometimes it is necessary to set a time: "You have two minutes to reach a solution.

V. Follow-up and evaluation:

Always allow time for discussion of the role-play. Ask the pupils about their roles. Get feed-back from the audience. Ask the audience what they would have done. A role-play can be followed with discussion, written assignments, and readings. The teacher's job is to get as many points of view into the open as possible.

Q. SELF-CONCEPT: "I AM ME"
(original idea from Barbara E. Long's 'Identity Auction'[1])

This unit begins with an auction, where articles are sold to the person who bids the most money. But in this case, the 'things' are a list of statements (see below), a copy of which is given to each pupil, and the money is imaginary. However, there is an auctioneer, who can be the teacher, the headmaster or a 'talkative' pupil, and who has a gavel, hammer, or shoe to use for 'closing the deal'. In fact, it is best for the teacher to join with the pupils rather than be the autioneer.

The rules are simply that each pupil has an imaginary 5,000 francs, pounds, dinars, kroner og whatever to use as he/she wishes for bidding and buying which items on the list are desired. Once a pupil has spent 5,000, he/she has to stay out of further participation in the bidding. The pupils should keep a record of their own money so they know when it is gone. Pupils are free to call up to the auctioneer the items

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1. Copyright: B.E. Long, 1971

which they would like to be auctioned but the auctioneer can also select Pupils (of all ages) get quite caught up in the auction and the auctioneer should help to build up the excitement and fantasy aspects of everyone's involvement by keeping it all moving along quickly. The bidding should be stopped after 20-30 minutes.

Discussion:

It is as difficult to describe the kind of discussion that can develop from the auction as it is to describe the power of the auction itself to call forth emotional involvement. There are four main themes which seem worthwhile developing during the discussion:

1. The 'auction effect': If a lot of others are getting something, we want it too. It is a type of group-psychology effect, e.g. if a few people start eating you suddenly feel hungry (start yawning, and you yawn; or walking faster in crowded cities). BUT WHY? (psychologists have named 'it' but not really explained it!)

2. Communication: Does the auction give us a chance to say something we would otherwise hesitate to say? What kinds of situations generally help to make communication easier or harder, e.g. romantic evenings, alcohol and parties, writing letters rather than telling someone directly? Are we saying things by what we buy, then, that really mean a lot to us?

3. Fantasy and Day-dreaming: Are many of the items that you have bought similar in some ways to the kinds of thoughts that go through your mind when you day-dream? What is this 'secret life' of ours all about? Are we more 'real' in our fantasy life than in our real life (Which others see)?

4. Individual Differences: Have we found out something about each other and ourselves that we may not have known before, about people, as each individually different? Were we using the auction, in a way, for expressing our own individuality? Is this what made some of the items and bidding so important to you? Should individual self-expression be so important? Does it hinder social co-operation?

Alternative Procedure

If you have sufficient time for discussion, an additional set of 'experiences' can result from arranging the pupils in a circle and having the pupil on one's right as one's parent while one is the parent to the pupil on one's left. Before bidding on an item it is necessary to ask the permission of the parent. If this is not granted, the pupil can still bid on the item, but, if he ends up with it, he pays double the amount of the final bid. You may want to do the auction a second time, using a list made up by the pupils and adding the 'parent's permissions'.

EACH PUPIL IS ALLOWED 5.000 to SPEND IN THE SESSION

Items for sale

1 I hate going to school
2 I am going to be rich
3 I like going to bed
4 I want to get away from home
5 Please give me a bike
6 I support Chelsea (local team)
7 I am a shy person
8 Boys are stupid
9 I am a nasty person
10 I really like everybody
11 Football is the best sport
12 Just be decent
13 I want to go on a long holiday
14 Leave me on my own
15 I like to knit
16 Lessons are boring
17 All life is at night
18 I like wild flowers
19 I like puppies
20 Money is all that counts
21 I am weird
22 School is a waste of good time
23 My mother loves me
24 Hold my hand
25 Stop touching me
26 I want to be an engineer
27 Perhaps I'll go to the moon
28 I love you so much
29 I want to go to the cinema
30 I thought I saw a pussy-cat
31 Let's all go on strike
32 I hate school dinners
33 I like crazy clothes
34 I like eating
35 Kiss me Kwick
36 Let's have a laugh
37 I want to travel all over the world
38 My life is all right
39 I like picking my nose
40 Soon I want to be a mother
41 Why can't girls be dustmen?
42 I don't want to get married
43 My thoughts are original
44 Life is a bore
45 I like to be boss
46 What is wrong with long hair?
47 My parents are fantastic
48 I like to be loved
49 Let me smoke; I don't care
50 I like squeezing things
51 I like painting my bike
52 Children are curious
53 Religion is the answer
54 I like eating
55 Why are we doing this?
56 I am superior/inferior to everyone
57 Money is nothing to happiness
58 I hate my brother/sister
59 I am afraid
60 Why don't people trust me
61 I am lonely
62 Please like me
63 Teachers are stupid
64 I hate getting up in the morning
65 Scratch my back
66 Why couldn't I be a girl
67 Boys have it all
68 Please tell me I am wonderful
69 Black is beautiful
70 Bid your own 'item'

Item	Purchaser's Name	Price

Item	Name	Price Paid	Balance
			5.000

R. SHIFTING YOUR VIEWPOINT

A part of what we call understanding another person or group often consists of being able to view situations from the other person's or group's viewpoint. In this lesson the pupils try to do this and then find out how the other person or group rates their understanding.

There are a number of forms this can take and the pupils may want to design their own 'experiments'. For example, if a pupil has a different opinion from a classmate, or teacher or parent, the pupil can set out to discover the line of reasoning and values which underlie the opposing opinion. This can be based on discussion with the opposition and reading things which explain the opposition's viewpoint. When the pupil feels ready, he/she tries to explain to the other person his/her own ideas about how the other person feels. Misinterpretations can then be clarified.

This process can be experimented with on an international basis. Here one is interested in exploring the different framework of psycho-socio-cultural processes as experienced by the pupils living in another country. One possible format for this was suggested by Peter Dublin. The pupils are presented with a series of specific questions under the following headings:

1) The self: what is important to me?
   what makes me unique?
   what are my strengths and weaknesses?
   who and what made me what I am?
2) The self and others:
   with whom do I associate? individuals? groups?
   who are my heroes? or models?
   what kinds of conflicts do I have and with whom?
   how are these conflicts managed?
3) Self and society:
   what are my roles in society, now and future?
   how much power will I have to influence society?
   how much control does society have over my life?

The teacher and/or pupils can modify this last according to time and the interests and age of the pupils. The basic idea, however, is that the pupils try to answer the questions as they feel a pupil (male or female) in one of the corresponding countries would answer them. The information is then exchanged with the corresponding class, which sends back their reactions. If time permits, both classes in the exchange should first answer the questions for themselves.

S. WHAT IS MAN?

This unit consists of a series of three questions that are typically not put to pupils. The three parts have generally been spread over three class periods to allow time for sufficient discussion.

Step 1. Working together in small groups, the pupils make lists to answer the question, "What is man?". They are instructed to be both factual and creative and as broad and complete as possible, e.g. man is a creature with an ear that responds to sound vibrations between the frequencies of 20 - 20.000 cycles/sec; and, man is a creature that bakes bread and then burns it in a toaster.

Before discussion the lists can be organised into categories by the pupils. This in itself is an interesting problem. The discussion about the lists can go in almost any direction the teacher and pupils want to take it, but the major objective is to determine and evaluate the importance of the universal aspects of mankind as a species.

Step 2. The same format can be used for this step. The question now becomes, "What is a (name of own nationality)?" The results of this are typically a picture quite similar to the stereotype we feel the foreigner

has of us. It is, then, interesting to discuss why this is so. Also, there is the question of the 'reality' of national character. What does it mean to say that Englishmen are different from Frenchmen? This can be followed up by a question such as: "Are French farmers more like English farmers than like Parisians?".

Step 3. The last question, worked on individually, is "Who am I?". Again, this should be answered with a list of single words and phrases or single sentences. The students may then want to try a guessing game: the teacher reads one of the lists or the first few items on a list (only for those pupils who have given prior permission) and the class tries to guess who wrote it.

The use of the three steps brings in the element of the greater difficulty typically found going from the first to the second and then to the third question. Why is it so difficult to 'put ourselves down on paper'? A good question to consider is the ways in which each one's 'Who am I' list would change from day to day and from year to year and the ways in which it would stay the same. At the end, using the three steps, the pupils can analyse the universal, the national and the individual processes and experiences which have 'shaped' them. The question of inherited versus acquired personality characteristics typically gets raised and is of great interest to the pupils.

T. PASSING NOTES

Aim

To show the class how certain things can be expressed in writing which won't be communicated in speech.

Materials

Large supply of 1/4 size sheets of paper and pens/pencils.

Instruction to the pupils

1. Everyone is to have a supply of paper (10 - 15 per pupil) and a pencil/pen.
2. Refer to note passing in class - generally forbidden, now encouraged.
3. Explain that there must be no verbal communication and that everyone must stay in their seat.
4. The idea is to write and exchange notes with other members of the class. There is no censorship.
5. The notes can be open, for everyone to read and pass on, or they can be folded over and on the outside written the following:
   a) Name of person note is for, but others can also read it.
   b) " " " " " " with a large letter (P) to show that it is a private note, not to be unfolded by others.
   c) They can be signed or anonymous.
6. On any note not private, as it is passed around, others can add to it.
7. NO TALKING. NO MOVING. RAISE HAND IF MORE PAPER IS REQUIRED.
8. Time allowed. About 20 minutes.

Follow up

Did everyone take part? What were the frustrations? Did you enjoy it and why? Did you write anything to someone you never speak to? Did you have a reply from someone you never speak to? Were you able to say things you normally would not say? Why? Was it a waste of time? Did you look at any note marked with a (P) that was to someone else? Why? Were you disappointed

in some of your replies? Were you pleased with some of your replies? How could this idea be expanded in normal letter writing; or is it? Could we solve or create more problems when communicating in this way? Should countries spend more time in communicating with each other and would it solve some of our international problems? What about pen friends? Try it at home with your parents and family or with your friends. Leave notes about the place for them to see. Should notes be signed? What about anonymous letters? Do they hurt people or do people just ignore them?

This is a useful unit to consider if your class has been having some problems. Although it seems a bit silly, and the pupils may also think so at first, once a class does get started, the activity seems to have a life of its own and it will be hard to stop after 20 - 30 minutes. The pupils seem to avoid writing "nasty" notes.

U. DESERTED ISLAND SCENARIO

This fantasy is directly related to the implications and concerns of power and relationship within a group. The participants will be confronted with a situation in which they are forced to react in such a way that there is a chance of survival.

The scenario is read out slowly with sufficient time in between the questions to get their meaning and implementation across to the pupils, to allow the fantasy to unfold.

SETTING: Close your eyes and relax. Clear your mind of everything. I want you to imagine that you and a group of your six best friends had been flying on a plane together, somewhere in the South Pacific. A terrible accident occurred, and you crash-landed near an island. Mysteriously you and your friends managed to survive, but the other passengers did not. They and the plane have sunk in the sea.

1. You've all just managed to swim ashore to safety. How do you feel? How does your body feel? Lie in the sand and feel the dampness and fatigue. Has anyone helped you? Did you help anyone?

2. You can see the island more clearly now. What does it look like? What does the air feel like? Can you smell anything? Can you hear anything? How do you feel?

3. You and your friends have a terrible problem. What is the first thing that you do? What do they do? Is everyone in agreement about that? Are you and your friends behaving any differently? Do you notice anything new about any of them.

4. I want you to think a while about some of your problems. Which are the least important? How are you going to solve them? Do you select a leader or does a leader emerge? What sorts of things happen? What is your part in all this?

5. Your begin to do something about this situation. You all begin to do some kind of task. How did this become clear? What job do you have? Is anyone working with you? What are other people doing? LONG PAUSE.

6. You've been active all day. The sun is going down and you're feeling tired. Have you eaten? You and your friends decide to go to sleep. Where do you sleep? You can rest now. Keep your eyes closed and think back on all that's happened. In a few minutes we'll open them and talk about the experience.

Suggested follow-up

The class is split up in groups of 5-7 to do a simulation . . about the forced stay on the island. Each group will consider the problems they might have to face and will put these thoughts (problems) in order of importance. Then each group will determine how they are going to solve the problems. In a plenary session each group reports to the class. The class will try to analyse group behaviour in crisis situations.

V. SCENARIO: CAT AND MOUSE FANTASY

A somewhat open fantasy with freedom for individual emotional responses. Deals with RELATIONSHIPS (agression-submission) and, POWER.

To be read slowly, but with animation, and long pauses after each question.

SETTING: Close your eyes and imagine that you're walking out of this room, and down a long sidewalk. You come to an old deserted house. Now you're going up the drive, up the porch steps. You try the door and it creaks open. You step inside and look around a darkish empty room.

1. Suddenly you begin to feel a strange sensation in your body. It begins to shudder and tremble. You feel yourself growing smaller and smaller. Now you're only as high as the window sill. You keep shrinking until you look up and see the ceiling very far away, very high. You're only as tall as a book and still growing smaller.

2. Something else begins to happen. You notice you're changing shape. Your nose is getting longer and longer, and hair is covering your whole body. Now you're down on all fours and you realize .... you've changes into a mouse.

3. Look around the room from your mouse position. You're sitting on one side of the room. Then you see the door move slightly.

4. In walks a cat. It sits down and looks around very slowly and with great casualness. Then it gets up and calmly begins to wander around the room. You're very, very still. Feel your heart beating. Feel your own breathing. Watch the cat.

5. Now it sees you and begins to stalk you. Ever so slowly, it comes at you. Then it stops right in front of you and crouches. What are you feeling? What does it look like. What choices do you have right now? What do you decide to do?

6. Just as the cat moves to leap on you, both of your bodies begin to tremble and shake. You feel yourself being transformed again. This time you're growing larger again. The cat seems to be getting smaller. And changing shape. You see the cat the same size as you, and now smaller.

7. The cat is turning into a mouse and you have become a cat. How do you feel being bigger and no longer trapped? How does the mouse look to you?

Do you know what the mouse is feeling? What are you feeling? Decide what you're going to do and then do it. What do you feel now?

8. It's happening again. The changing. You're getting bigger and bigger. Almost your full size. And now you're you again. You walk out the door and back to this building and this room. You open your eyes and look around you.

DISCUSSION: After an open discussion of their reactions during the scenario, the following kinds of questions might be used to broaden the context of the discussion:-

1. Are there similarities between inter-personal relationships and inter-group or international ones?

2. What happens to individual's relationships in power based positions e.g. the role of a factory owner, headmaster, army general?

3. Do people exploit power positions to achieve satisfactory personal relationships.

4. In the context of our discussions, what is the real meaning of political power?

5. It is claimed that MIGHT makes RIGHT.

6. Is there a balance between submissive and aggressive elements of a good relationship? How does one achieve this?

7. One definition of 'power' is "diplomacy backed by (the threat of) force". What is the real extent of power today? Individual, group, national, international (UN)?

8. Coercion (to constrain into obedience) used to be prevalent. Social pressures, subtle manipulation (the Hidden Persuaders) has taken over.

9. What is the power relationship between today's developing and developed world?

W. JOB AND OCCUPATION

A ship full of passengers breaks away from its dock during a storm, and drifts out of the harbor. The crew are on land so the passengers have to take over the ship. Which job would the pupils like most/least to have?

	JOB	Boys		Girls	
		Most	Least	Most	Least
1	Barman				
2	Captain				
3	Cook				
4	Deck-hand				
5	Doctor				
6	Engineer				
7	Man at wheel				
8	Cabin attendant				
9	Musician in the orchestra				
10	Purser (in charge of the money)				

After the results are on the blackboard (as above), the pupils can use them as a start to a wide-ranging discussion of choice of occupations. How important is the status of a job? Is the status always closely related to the amount of pay? Is it more important to have a job which really uses one's own abilities or one with good pay, good hours and working conditions. Do you know your own special abilities or talents well enough to guide you in choosing a job or educating yourself for a particular job? If not, is there anything you can do about it?

The differences in the choices between boys and girls can also be used for discussing sex roles in society.

X. SEX ROLES AND STEREOTYPES

Cut from magazines pictures of eyes, noses, mouths, and larger parts of faces (e.g. eyes and nose, mouth and chin...without make-up), indicating on the back the sex of each. The pupils must discuss whether they think each is male or female, how much of a face is necessary to know male from female, how much difference really exists, apart from make-up and hair style. Point out that among many animals the male and female look just alike. If there are differences in animals, what are they?

LIST OF ADDITIONAL UNITS

1. Antique Shop Fantasy: a fantasy scenario that deals with self-identity and our relationships with objects.

2. Autobiography: a method, with variations, for getting better acquainted - pairs of pupils present each other to the class.

3. Beauty: to explore ideas and images of beauty and the human body.

4. Bureaucratic Forms and Tests: a funny 3-minute test to illustrate our reactions to tests and to following 'bureaucratic' instructions.

5. Card File: a practical project in communication about individual needs and resources which stresses interdependency.

6. City of the Future: what do we expect of the future -- a scenario about urban human and housing styles.

7. Export-Import: pupils do a study of local imports and exports including attitudes and decision processes of those engaged in trade.

8. Fantasy Country: a framework for stimulating pupils' imaginations about national alternatives, good and bad.

9. Fantasy trip: pupils imagine themselves taking a trip to any foreign country and then individually fill out a questionnaire about their trip.

10. Films: pupils plan and make a film based on their own activities, something about their lives or their reactions to their surroundings which they want to communicate to others (or exchange with another country)

11. Foreign Residents: some ways in which foreign residents can help us to better understand our own country and ourselves.

12. Fortune Telling: a local and cross-cultural study of fortune tellers is related to human views of chance and destiny and anxiety about future decisions.

13. Freedom of Speech: the theme of the fable about the boy who cried "wolf" is used to examine concepts and processes of free speech.

14. Group Pressures: an experiment that illustrates group influences on our judgements and then relates this to interpersonal relationships and social control.

15. Group Problem Solving: an excellent exercise for showing the different types of reactions when a group tries to solve a difficult problem together, without a leader.

16. Ideal Community (Society): the pupils design an ideal community as a means for exploring basic features of man's nature - individual and social.

17. Inside-Outside: a short experiment illustrates child-training and feelings about cleanliness, health and bodily processes, including discussion of cultural differences.

18. It's a Small World: given any two people in the world, X and Z, how many intermediate acquaintance links are needed before X and Z are connected? An experiment with a startling outcome.

19. Learning, 'Shaping', Rewards: a learning experiment in which each pupil uses positive reward (feedback) to teach another to do something ('shaping' behaviour).

20. Loaning Words: pupils study the processes involved in the exchange of words amongst languages.

21. Mass Movements: pupils in your class wear identical arm bands for a day and refuse to discuss them with others at the school. Since the reactions can become dramatic, the teacher should be prepared to stop it if emotions get too high.

22. Mine and My Neighbour's Language: an exploration of interdependencies for a multi-linguistic class.

23. Multistability in Perception: pictures and drawings that can be seen in two ways are used to demonstrate features of visual perception and the brain.

24. Normal Behaviour: data from the class illustrates quantitative concepts of human activities and their relation to social norms (rules of correct behaviour).

25. Order and Redundancy in Language: if we know three words from a sentence, we will often make a correct guess about the fourth.

26. Reaction Time: a simple experiment illustrating the brain's control of actions, and methods for measuring behaviour (including statistics).

27. Rotating Trapezoid: an illusion apparatus to demonstrate stereotype visual reactions and our inability to change them.

28. Scenario for a Character in Literature: a fantasy trip with a new identity as a character in a story.

29. Sex Roles and Stereotypes: a series of exercises and experiments that examine different aspects of the subject.

30. Social Influence on Behaviour: can people be influenced to sign (or not to sign) a petition by the reactions, just before, of another person?

31. Two-Person Interviews: a communication process for sharing, with another, my view of myself and establishing a 2-person 'mutual' world.

32. World Floating University: in which pupils develop their own international university....on a ship.

33. Zoo Fantasy: a fantasy trip to the zoo, as visitor and as animal.

34. Words and Things: a series of exercises and experiments to increase awareness of what can be learned from class discussions and to provide training in the means for achieving these improved results.